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UNIVERSITY OF ALBERTA

Information Needs of Alberta Pork Producers

by

Kelly John Knox

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF

Master of Science

IN

Agricultural Economics

Department of Rural Economy

EDMONTON, ALBERTA

SPRING 1991

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The undersigned certify that they have read, and recommended to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled Information Needs of Alberta Pork Producers, submitted by Kelly John Knox in partial fulfillment of the requirements for the degree of Masters of Science in Agricultural Economics.

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Date Nov. 8, 1990

ABSTRACT

This study was undertaken in order to determine several items relating to the information needs of Alberta pork producers. The items determined were: 1) the use of information sources for general information needs; 2) the level of use and satisfaction with information sources available to Alberta pork producers and 3) the specific information needs of Alberta pork producers.

A literature review was conducted which focussed on the history of Canadian agricultural experimentation and extension and the dissemination of information and innovation.

In addition, a review of the primary sources providing information and services to Alberta pork producers was presented. The entities reviewed were the Alberta Pork Producers Development Corporation (APPDC), Alberta Agriculture, agricultural business interests and the University of Alberta.

The main objectives of this study were met through focus group studies (using the Nominal Group Technique), mailed questionnaires and telephone interviews. The participants in the focus groups and the respondents to the mailed and telephone surveys were selected from the Alberta Pork Producers Development Corporation's 1988 active producer list.

The Information Needs of Alberta Pork Producers study led to a number of observations and conclusions presented in Chapters 4 through 7. In addition, recommendations, presented in Chapter 8, were derived from this study. Recommendations include: 1) the optimal sources of information to be used for the satisfaction of Alberta pork producer information needs; 2) the suggestion that the Faculty of Agriculture and Forestry review the effectiveness of resources allocated to the Agriculture and Forestry Bulletin and Feeders' Day Report; 3) the suggestion that the APPDC take an active role in providing Alberta pork producers with information on government programs and policies; 4) the suggestion that Alberta Agriculture create an employment position for the coordination of extension activities and popularization of research aimed at the commodity groups in Alberta and 5) the suggestion that the four entities providing information to Alberta pork producers make use of radio and newspapers as an extension tool.

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1 Introduction

1.1 Reason for the Information Needs of Alberta Pork Producers Study

Information relating to different topics, presented in different forms and, provided by different institutions is required in the decision making processes of Alberta pork producers. Richardson, Hardaker and Anderson (1977) tell us that producers must make production, investment and, marketing decisions associated with their businesses. Further, Sen (1977) outlines the decision making process which consists of four steps as the producer: 1) defines the objective; 2) identifies the possible choices; 3) collects the relevant information and 4) draws the appropriate inferences. The need for information in the decision making process thus having been established in general terms, it is necessary now to determine the particular informational needs of Alberta pork producers that are associated with their decision making processes[1].

There are recognized inputs needed for the production of hogs in Alberta. Among these inputs is information. Information may be in the form of written, verbal, or visual communication. It may also convey different topics ranging from technical, to financial, and to marketing matters. Further, information may be provided by different institutions such as private firms, Alberta Agriculture, the University of Alberta and or, the Alberta Pork Producers Development Corporation (APPDC). The objectives associated with this research project recognize these variables present in the information search processes of Alberta pork producers.

1.2 Study Objectives

The title of this thesis is the Informational Needs of Alberta Pork Producers. The primary objectives of this thesis project are:

1. To present a summary on reviewed literature that focuses on diffusion and decision making processes.

---

1 This research project was initiated by the Alberta Pork Producers Development Corporation (APPDC) Research Committee which was acting on the guidance of its pork producing membership. This research project arose from concerns arising from the APPDC membership on the availability, form and, content of current information available to them. Accordingly, monies were made available to University of Alberta researchers who were prepared to undertake this project. Additional funds were also made available by the Alberta Agricultural Research Institute.

2. To conduct research and present a summary of the primary sources of information and extension services available to Alberta pork producers.

3. To determine the sources of the information currently used by Alberta pork producers.

4. To determine the attitudes of the Alberta pork producers towards the information available.

5. To determine the informational needs of Alberta pork producers.

1.3 Hypotheses

In keeping with the foregoing objectives, this thesis will examine the information needs of Alberta pork producers. Furthermore, the sources of information and satisfaction with the information provided will be examined. In addition, four independent variables have been selected to determine their impact upon Alberta pork producer information needs, sources of information and satisfaction with information. These four variables are: 1) APPDC Producer District; 2) years of experience in the hog industry; 3) number of hogs marketed in 1988 and 4) proportion of gross farm sales derived from hog sales.

Based on the foregoing, several specific hypotheses were developed:

Ho_1: Information sources used by Alberta pork producers for general information needs are similar when crosstabulated by APPDC Producer District variable.

Ho_2: Information sources used by Alberta pork producers for general information needs are similar when crosstabulated by years of experience in the pork industry variable.

Ho_3: Information sources used by Alberta pork producers for general information needs are similar when crosstabulated by the number of hogs marketed in 1988 variable.

Ho_4: Information sources used by Alberta pork producers for general information needs are similar when crosstabulated by the proportion of gross farm sales derived from hog sales variable.

Ho_5: Information sources used by Alberta pork producers and average satisfaction with these sources are similar when crosstabulated by the APPDC Producer District variable.

Ho_6: Information sources used by Alberta pork producers and average satisfaction with these sources are similar when crosstabulated by the years of experience in the hog industry variable.

Ho_7: Information sources used by Alberta pork producers and average satisfaction with these sources are similar when crosstabulated by the number of hogs marketed in 1988 variable.

Ho_8: Information sources used by Alberta pork producers and average satisfaction with these sources are similar when crosstabulated by the proportion of gross farm sales derived from hog sales variable.

1.4 Methods of Research and Sources of Data Used in this Thesis

In order to accomplish the objectives of this thesis, three information gathering mechanisms were chosen and used to obtain information from Alberta pork producers. These were; focus groups, mail-out questionnaires and, telephone interviews[2].

Focus group studies using the Nominal Group Technique (NGT)[3] were conducted in Edmonton, Red Deer, and Calgary in December 1988. One objective of this research process was to explore the range of attitudes, opinions, and concerns that exist on a given topic, in this case relating to the informational needs and concerns of Alberta pork producers[4]. The individuals selected for these meetings were chosen from lists of past and present directors and delegates of the Alberta Pork Producers Development Corporation (APPDC). The second objective for undertaking this research process was to use the results obtained from the nominal groups to facilitate the development of questionnaires for the mail and telephone survey.

The mailed questionnaire covered a broad range of topics and issues[5]. The telephone interview was a summarized version of the mailed questionnaire[6]. Both the mailed questionnaire and telephone interview made use of open-ended and closed questions. These questions were coded and entered, in a machine readable format, into a mainframe computer system. This process provided a data base. A sample of six hundred (600) producers was selected from the APPDC's

---

2 Several Hutterite "Hog Bosses" were interviewed personally during February 1990. The telephone survey form was used to gather data from these producers. This study received no results from Hutterite pork producers because they were excluded from the sampling frame used for the mail-out questionnaires and telephone interviews.

3 The procedure used was that of Lamble's summary of Delbecq (1968). *Group Techniques for Program Planning: A Guide to Nominal Group and Delphi Processes.*

4 Results of the focus group study are presented in *Department of Rural Economy Staff Paper No. 90 - 07.*

5 See Appendix 1.

6 See Appendix 2.

"active producers list". The selection process implemented the stratified random sampling technique. The mail-out questionnaire was sent to all individuals in the sample. The telephone interview was focused at those individuals in the sample who did not respond to the questionnaire[7]. The number of responses acquired by means of the questionnaires and interviews was approximately 300.

Other objectives were carried out by means of researching available literature and conducting informal interviews.

1.5 Background Considerations

The province of Alberta has had a long standing, established swine herd. In 1988, APPDC records showed that there were 6,693 active producers whose sales were coordinated by the Alberta Pork Producers Development Corporation (see Table 1.1)[8]. During this time, the 1988 APPDC Annual Report indicated that nearly 2.3 million hogs were marketed. The Agricultural Statistical Yearbook also informed us that total receipts from the sale of hogs in Alberta were estimated at 248 million dollars in 1988, which represented 5.6 percent of the province's total farm cash receipts[9]. The pork production sector of Alberta can thus be considered a vital part of Alberta's economy, and deserving of a research project of this scope.

The four primary extension entities in Alberta providing information and extension services to Alberta pork producers are Alberta Agriculture, the private industry sector, the University of Alberta, and the APPDC. Each one of these institutions has a mandate which dictates its level of energies allotted to the task of extension processes. An overview of the informational services and extension programs made available by these institutions will be included in the text.

---

7 The question "Did you respond to our mail-out questionnaire which was sent to you in March of 1989?" was not included on the telephone interview. This omission was intentional. The decision to omit this question precipitated from focus group studies during which University of Alberta researchers were told by participants that "we (pork producers) must be the most interviewed, "questionnaired" and, otherwise pestered group of producers in Alberta". The researchers thought that if producers were given the option to terminate the interview that they would take it. The introduction on the interview was similar to that on the covering letter to avoid the possibility of individuals in the sample from responding twice. The interviewers associated with this project were instructed not to interview producers who indicated that they had responded to the questionnaire.

8 Table 1.1 has been adopted from "Producer Volume Range Statistics: 1988" supplied by the APPDC.

9 Agricultural Statistics Yearbook. Pp. 2 - 6.

Table 1.1

Alberta Producer Volume Range Statistics: 1988*

Range of Head Marketed From	To	Total Number Producers	Percent of Total Producers	Total Number of Head	Percent of Total Number Produced
1	49	3,211	47.98	51,952	2.31
50	99	811	12.12	57,994	2.57
100	199	728	10.88	103,855	4.61
200	499	828	12.37	267,437	11.87
500	999	499	7.46	354,950	15.76
1,000	1,499	244	3.65	291,745	12.95
1,500	2,499	204	3.05	391,798	17.39
2,500	4,999	128	1.91	459,909	20.42
5,000	99,999	40	0.60	272,789	12.11
Total	of Ranges	6,693	100.00	2,252,429	100.00

* Adapted from APPDC Table of Alberta Volume Range Statistics: 1988.

1.6 Organization of the Thesis

This thesis will consist of several parts which will be focused at meeting the objectives stated in the foregoing. Figure 1.1 illustrates, by means of a flow chart, the process through which research on the Alberta Pork Producers Information Needs Study will be conducted.

Chapter 2 will consist of a literature review focussing on the history of agricultural experimentation and extension, diffusion of information and decision the making processes. This section will attempt to familiarize the reader with these subjects.

Chapter 3 will consist of an explanation and elaboration of research methods used. Literature on mailed questionnaires, and telephone surveys and sampling will be reviewed. The information gathering techniques will be elaborated in the context of their objectives, study procedures, advantages and limitations. The sampling methodology will be reviewed in the context of research objectives.

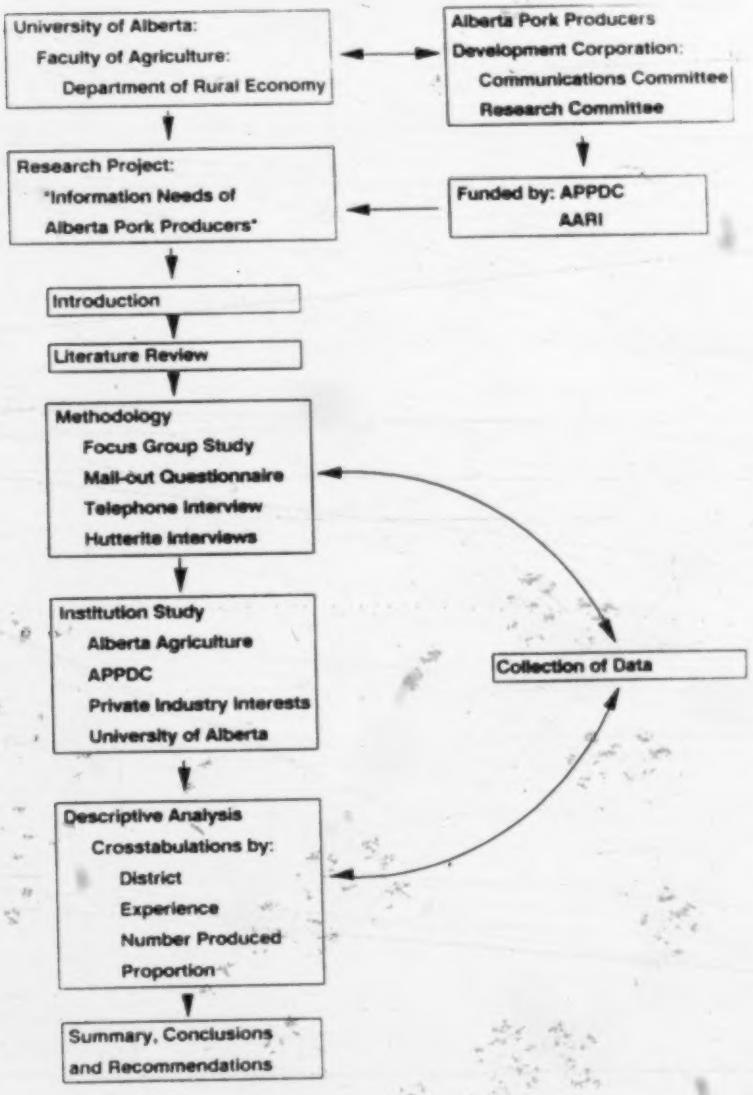
Chapter 4 will consist of a review on information and extension services available to Alberta pork producers. Four institutions will be analyzed in this section. They are; the APPDC, Alberta Agriculture, the private industry sector, and the University of Alberta.

Chapter 5 will consist of analysis of data and findings discovered in conjunction with the three information gathering techniques used in this project.

Chapter 6 will be devoted to conclusions arising from this project and will include comments on the following: study overview, literature reviews, fulfillment of objectives and recommendations.

Figure 1.1

Alberta Pork Producers' Information Needs Project Flow Chart



2 Literature Review

2.1 Introduction

This literature review will consist of two sections. One will focus on the historical aspects of agricultural experimentation and extension and the other will focus on dissemination of information and innovation. The development and delivery of science-based information and applications of diffusion research will be reviewed as a part of the latter section.

2.2 Historical Review of Agricultural Experimentation and Extension

The history of agricultural experimentation and extension in Canada will be reviewed in addition to specific developments that have occurred in Alberta.

2.2.1 Development of Agricultural Experimentation and Extension in Canada

Agricultural experimentation and extension began in Canada almost four centuries ago. Blackburn and Vist (1984) and Swanson and Claar (1984) indicate that the first experimental endeavor relating to agriculture was a seed plot conducted in 1606 by Marc Lescarbot at Port Royal, Nova Scotia. These sources also suggest that a number of model farms were developed in Canada over the next half century. Quebec opened its first agricultural school in 1670. Exchanging information by means of agricultural societies became popular in North America in the 18th century. Blackburn and Vist (1984) and Swanson and Claar (1984) also inform us that the informal extension services offered by these societies were the forerunners of current agricultural extension.

The "history of the United States' Cooperative Extension Service is important to note because it laid some foundations for formal extension work in Canada ... (Blackburn and Vist 1984, p.7)." Blackburn and Vist (1984) indicate that the 1862 Morrill Act led to the establishment of at least one Land - Grant College in every state and the 1867 Hatch Act led to the creation of State Experimental Stations. The Smith Lever Act, establishing the Cooperative Extension Services, in addition to the foregoing Acts combined to form the the foundations for current agricultural experimentation and extension in the United States.

Tenkink (1990) indicates that in Canada, the British North America Act of 1867 defined education as a provincial responsibility. Although extension was not specifically mentioned in the Act, extension ultimately became the responsibility of the respective provinces. The Experimental

Farm Stations Act of 1886 authorized the establishment of experimental farm stations throughout Canada. These various stations were charged to conduct experimentation focussing on four main program areas. These were: resources; animals; crops and food research. In total, 32 experimental farm stations, in addition to several substations, were established in Canada.

2.2.2 Development of Agricultural Experimentation and Extension in Alberta

McMullin (1991) of the Agriculture Canada Research Branch indicates that three experimental farm stations and five substations were established in Alberta: the Beaverlodge Research Station and Fort Vermilion Experimental Farm (substation) were established in northern Alberta; the Lacombe Research Station and Vegreville Substation were set up in central Alberta and the Lethbridge Research Station with associated substations in One-Four, Vauxhall and Stavely were established in southern Alberta.

Blackburn and Vist (1984) report that the Alberta Department of Agriculture began extension activities in 1916 when five District agents were hired. Prior to this time, "demonstration farms (seven in 1911), short course schools (held in nine locations) and three agricultural schools/colleges (formed in 1912) were the main thrust of agricultural estension (Blackburn and Vist 1984, p.6)." Over several decades, the Alberta Department of Agriculture's extension infrastructure has developed to is current state (see Chapter 4.3), providing a wide range of extension services through District Agriculturalists, District Home Economists, Agricultural Engineers, 4-H Staff and agricultural colleges.

2.3 Dissemination of Information and Innovation

2.3.1 Development and Delivery of Science-Based Information: The Theory-to-Practice Continuum

> "The planning and development of extension programmes is a continuous and interrelated series of processes. The purpose of extension is to facilitate learning and action among the members of farm families and communities, extension coordinators, extension educators and administrators, and personnel of other service agencies and groups in order to promote agricultural production and improvements in the general quality of rural life. Extension programme planning is conducted through a systematic sequence of actions to promote the diffusion and utilization of science-based and indigenous knowledge throughout a particular geographic area or production sector for which that knowledge is relevant (Swanson: 1984, p. 108)."

The objective of this section is to outline the systematic sequence of actions that a human resource vehicle may or should follow during the operationalization stage. The meaning that will be attached to "vehicle" in this context, as defined by Webster's Unabridged Dictionary, is an agent of transmission. In this case a change agent transmitting extension services. In order to promote change by way of the development and delivery of science based information, Lionberger and Gwin (1982) indicate that there are nine functions which must be performed by an institution or a change agent. The nine functions are within a theory-to-practice continuum: 1) innovation; 2) validation; 3) dissemination; 4) information gathering; 5) legitimation; 6) integration; 7) reinforcement; 8) providing services and 9) participatory planning. When exercised by a change agent, there may be a realized increase in the rate of adoption of an innovation. An examination of these nine functions using the material from Lamble (1984), Lionberger and Gwin (1982) and Rogers and Shoemaker (1971) follows.

2.3.1.1 Innovation Function

Innovation, the development of a new idea, practice or input is generally formulated or realized at the public/government, university or corporate (service industry) level. The development of new technology may be initiated by long term planning for an industry production sector or in answer to a current problem. Although a change agent may have only minimal input in the innovation function, the change agent can be instrumental in the remaining functions in the theory-to-practice continuum.

2.3.1.2 Validation Function

Every innovation or new notion contrived is not always flawless in practice. There is a need for the validation function at this point in order to determine, through testing, whether a new concept will be suitable under field conditions. Should preliminary testings reveal flaws, revisions to the initial innovation may resolve the problems; if not it may be dismissed altogether. This step is generally performed at the same level as the innovation development. It could, however, be carried out in conjunction with the innovators of a production sector for whom the innovation has been formulated. During the latter stages of the validation process early communication with the innovators and influentials in a production sector can help pave the way for local trials and demonstrations.

2.3.1.3 Dissemination Function

The dissemination function is generally carried out by the institutions that develop the innovation, and their respective extension agents. This is especially true in the service industry sector which interfaces with agricultural production. The goal in this function is to render the new information accessible to those that are in a position to use it. Extension-education programs must determine the needs and interests of farmers regarding new innovations and the necessary information required to form opinions about the new concept.

The next task is to relay the information to the producers in a practical, clear and timely manner. To accomplish this, the change agent uses all applicable communication channels available. Reporting new information and technologies as they are developed will increase producer awareness. Given this information, the innovators in a given production sector may want to validate the new idea for themselves. As for the remaining adopter groups, they generally do not hear, see, or absorb information unless they have some need for it or reason to seek it.

When individuals or groups encounter a crisis or a small dilemma they may request immediate answers to their problems. Lionberger and Gwin (1982) refer to these occasions as "teachable moments" which are rewarding opportunities for change agents to disseminate information. Demonstrations, tours, fairs, field days, meetings and other events can be used to assemble producers. At these gatherings, they may hear, discuss and inquire about new information which may be beneficial to them.

2.3.1.4 Information Function

The information function refers to the process of the producers becoming informed and informing others on all of the aspects of a new idea or practice. If producers approve of an idea, procedure or application, it may then be evaluated. Producers may try to obtain information on the attributes of an innovation as such: Does it fit current conditions on the farm? How much will it cost? or What advantages can be gained? Although the producer is primarily responsible for this function, the extension agent can assist by making the needed information readily accessible and by offering advice.

2.3.1.5 Legitimation Function

The legitimation function is exercised when the producer persuades himself that an innovation will work in his farming operation and yield some worthwhile advantage. This function is the responsibility of the producer, however research and extension services can offer assistance in this matter. At this point in the adoption process there can be many variations and factors that influence the rate in acceptance of change. A rather subtle approach that an extension worker can choose during this function is to convince some influential producers (not necessarily the innovators) to demonstrate the innovation. A group meeting at which members of the adopter group can talk to influential producers, and possibly innovators, is the next step in the process. This may be an effective method by which producers in a particular production sector convince themselves of an innovation's worthiness.

2.3.1.6 Integration Function

The integration function involves fitting the new idea, practice, or input into a producer's own operation. The onus of fitting the pieces of the new information and technology together with the producer's supplies (and possibly new supplies), labor, and capital has traditionally been left up to the individual producer. This process may be difficult for the producer, verging on impossible, resulting in a halt in the adoption process. At this point it would be important for a change agent to help the producer integrate his resources. Lionberger and Gwin (1982) suggest several ways in which this may be accomplished: 1) by extension agents working together with producers to formulate and test new types of technologies / practices; 2) by putting extension agents into the field who thoroughly understand local farming conditions; 3) by providing the services of farm management specialists to assist with the integration process and; 4) by improving the management ability of individual producers through extension.

2.3.1.7 Reinforcement Function

The responsibility of the reinforcement function falls back on the change agent of the respective institutions which initiated the adoption process. They can help by providing objective evidence of results and by reporting experiences of successful trials using any or all appropriate media channels. Reinforcement stems from producers learning that others are applying a particular practice and becoming convinced that it is a good practice. This function is sometimes

needed after producers apply a certain practice so they will adopt it permanently. By giving recognition and/or publicity to producers that have experienced successes, the change agent will help insure that the innovators/early adopters will continue with the new practice and possibly entice later adopters to begin the adoption process through legitimation and persuasion.

2.3.1.8 Service Provision Function

When certain elements or services necessary for the implementation of a given adoption are absent or scarce, the change agent can assist the adoption process by making these available to producers. The change agent draws upon his resources, contacts and expertise in order to help ensure the continuation of the adoption process.

2.3.1.9 Participatory Planning Function

The participatory planning function is the final function in this scenario and involves a joint effort between the change agent and the production/ farming community. Organizing producers of a community (in a geographical or production context) into a group for the purpose of drawing up a short and long term plan can aid in the adoption process. Participatory planning gives producers a feeling that their thoughts and inputs are being recognized, making them more receptive to changes arising from the planning meetings. The meetings enhance communication among producers, agricultural researchers and educators, agricultural agencies and agribusinesses and help to coordinate research with the needs of producers. Participatory planning, as opposed to top-down planning, programs tend to be more suited to fulfill the needs of producers.

The priority that is placed on the preceding nine steps within the theory-to-practice continuum and the developed infrastructure to support these steps depends on the mandate of respective change agents: some are goal oriented and others are process oriented. The planning, developing and operationalizing of an extension programme is a continuous process that should be integrated and focussed on the clients' needs in order to obtain optimal results.

2.3.2 Applications From Diffusion Research

2.3.2.1 The Influence of Attributes of an Innovation on the Rate of its Adoption

What makes a difference in the rate at which new ideas or practices are adopted? Part of the answer can be found in the attributes of the innovation itself. Rogers and Shoemaker (1971) indicate that attributes of innovations include the following: relative advantage, compatibility,

complexity, trialability and, observability. "Each of these five (attributes) are interrelated with the other four, but are conceptually distinct (Rogers and Shoemaker 1971, p. 137)." Interactions and combinations of these attributes should also be taken into consideration. Some of the attributes relate to what the innovations actually are, while others pertain to what potential adopters perceive the innovations to be.

2.3.2.1.1 Relative Advantage

In the context of adoption speed, relative advantage refers to the degree of benefit that could be attained resulting from the adoption of an innovation. If making money from a cash crop or production system is at issue, profit would be central to the argument of adoption. Lionberger and Gwin (1982) tell us that if an innovation is sufficiently profitable, no outside education effort will be required for it to be adopted quickly. The indicated profit increase needed for this phenomenon to occur is 25-30%. In addition to increased profit opportunities, there are other innovation attributes to be considered in the adoption decision such as, costly inputs, the conditions under which inputs may be obtained, and the relationship between the respective input and output markets. If the insurance of the family's food supply, as opposed to profit, is the primary objectives of the production unit, factors such as taste and yield may take precedence. Additional factors in this scenario could include maturity time, resistance to insects, disease, and other attributes of the innovation.

2.3.2.1.2 Compatibility

> Compatibility is the degree to which an innovation is perceived as consistent with existing values, past experiences, and needs of the receivers. An idea that is not compatible with the salient characteristics of a social system will not be adopted so rapidly as an idea that is compatible. ... An innovation may be compatible (1) with sociocultural values and beliefs, (2) with previously introduced ideas, or (3) with client needs for innovations (Rogers and Shoemaker 1971, p. 145)."

Change agents can greatly increase the rate of acceptance of new ideas as practices when they link the new practice or idea to favorable past experiences in the producer's minds. Lionberger and Gwin (1982) say that in general, the greater the relative advantage of a new idea as practice, over the old one, the more likely that farmers will adopt it quickly. The comparative utility and compatibility of innovations can vary depending on given times and circumstances, resulting in differences in adoption rates.

2.3.2.1.3 Complexity

Complexity refers to the "degree to which an innovation is perceived as relatively difficult to understand and use (Lamble 1984, p. 38)." The level of complexity associated with an innovation is often perceived to be quite high initially, but decreases as more is learned about the innovation. Complications may result due to the need to change practices or due to characteristics of the innovation. Simple innovations tend to be more readily adopted than those which are more complicated. The use of mass media may be sufficient to promote adoption of simple innovations; innovations that are more complex may require interpersonal communication. Lamble (1984) distinguishes between innovations may be complex due to quantitative and / or qualitative changes: those changes which require quantity changes of "existing practices" and the addition of "new enterprise" to a farming operation, respectively.

2.3.2.1.4 Trialability

Trialability refers to "the degree to which an innovation may be used experimentally on a limited basis (Lamble 1984, p. 38)." Lionberger and Gwin (1982) tell us that it is a common practice during the early adoption process for a producer to try a bit of an innovation initially and then a little more later if the initial trial was successful. The benefit of a limited trialability scheme is that a small scale trial allows a potential adopter to decrease the level of risk and allows him to evaluate the innovation in his own farming scenario. "The trialability of an innovation, as perceived by members of a social system, is positively related to its rate of adoption (Rogers and Shoemaker 1971, p. 155)." In the event that a trial stage is bypassed, many producers will not adopt an innovation unless someone in a position similar to theirs' has tried it locally. This is especially true when there is no opportunity for a potential adopter to conduct a limited trial.

2.3.2.1.5 Observability

Observability refers to the "degree to which the results of an innovation are visible to others (Rogers and Shoemaker 1971, p. 155)." The observable qualities of an innovation puts constraints on how it and its qualities can be communicated to potential adopters. While reports, illustrations and graphics may be needed to communicate abstract concepts, tangible innovations can be shown as they are. This is further complicated by the inclination of people to

depend disproportionately on seeing and hearing, and on their ability to apply abstract knowledge to their own situations. Lionberger and Gwin (1982) say that potential adopters can differ in their ability to appreciate the tangible and intangible qualities of an innovation, thus observability of innovations can vary.

2.3.2.1.6 Interrelated Attributes

Adoption of some innovations may result directly from a single attribute. In some cases, the attributes are self-evident. However, Lionberger and Gwin (1982) tell us that the manner in which innovation attributes interrelate (combined effect), and their relative importance at different stages in the individual adoption process also affect the rate of adoption. High favorability or value placed on some attributes may overcome deficiencies or negative influences of others. Communication strategy with respect to the adoption process, also can be related to the attributes of an innovation. Rogers and Shoemaker (1971) suggest that the awareness and interest stages, the complexity and compatibility of an innovation tend to have precedence. During the evaluation stage (persuasion function) the relative advantage of an innovation takes precedence. After the potential adopter makes the decision to try an innovation, trialability takes precedence.

2.4 Literature Review Summary

Reviewing the literature associated with this chapter has facilitated an understanding of concepts relating to the historical aspects of agricultural experimentation and extension and the dissemination of information and innovation. Insight into these concepts will illuminate material covered in following chapters.

3 Research Methods: Informational Needs of Alberta Pork Producers Study

3.1 Introduction

The Information Needs of Alberta Pork Producers research project was initiated, as its title infers, to provide insight on the informational needs and concerns of Alberta pork producers, the sources of information available, and the current attitudes of producers towards these sources.

This thesis utilized three methods to acquire primary data / feedback in order to meet the foregoing objectives. These methods were: 1) focus group studies[10]; 2) mail-out questionnaires and 3) telephone interviews[11]. The remainder of this section discusses these methods with respect to their objectives, procedures, advantages and limitations. Also, a brief composition focusing on the sampling strategy used, for the mail-out questionnaires and telephone interviews, is included.

3.2 Mail-out Questionnaire Study

3.2.1 Objectives

The principal objective of implementing mail-out questionnaires in this research was that they would provide a data base which could be used to investigate the primary objectives of this thesis. Another objective of using mail-out questionnaires was to acquire the above data base from a sample of pork producers, residing in a geographically extensive area, in an expeditious and cost efficient manner.

3.2.2 Procedure

The procedure used for developing a mail-out questionnaire study is not prescribed for all studies. A researcher must tailor the study and its components to the respondents as well as the study objectives. Baumgarten (1979) provides some enlightenment on the task of developing such a study.

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10 The objectives, study procedure and results of the Alberta Pork Producers Focus Group Study conducted by University of Alberta researchers may be found in "An Examination of Concerns of Alberta Pork Producers" by Knox, Murri and Hawkins (1990).

11 Technically, four research methods were used to gather feedback from Alberta pork producers. The fourth method was that of personally interviewing several Hutterite "Hog Bosses". The telephone interview form was used as the framework for the personal interviews. These respondents were selected from a list provided by the APPDC.

> With escalating demands for information, the survey questionnaire is gaining more and more prominence as a tool of research. Questionnaire design, many researchers insist, remains in the realm of art, eluding reduction to any simple collection of scientific principles. Yet, as for any art, there are basic skills which can be learned, and which need only be supplemented by common sense and a certain degree of scientific sophistication (Baumgarten 1979, p. i).

A mail-out questionnaire study consists of several components: the development of a questionnaire; the selection of a sample; the development of a covering letter; the coding and entering of the questionnaire responses and; the analysis of the accumulated data. Successful execution of these components will help yield a meaningful study.

3.2.2.1 Development of a Mail-out Questionnaire

> A questionnaire is typically a printed form that is handed, or mailed, to potential respondents. It is usually a self-contained form that provides respondents with all the information they will need in order to complete it (Abrahamson 1983, p. 312).

A mail-out questionnaire is designed to be an instrument of two-way communication: information is transmitted from researchers to potential respondents in the form of a questionnaire and information is transmitted from respondents to researchers in the form of answered questions.

The mail-out questionnaire study developed by researchers of the University of Alberta made use of many of the tools suggested by reference materials on this topic (Abrahamson (1983), Bailey (1987), Baumgarten (1979) and, Luck (1978)). Questions pertaining to different subject matter were included in the questionnaire. The scope of topics covered in the questionnaire closely followed the results of the focus group study. For example, there were questions on demographic information on / of the respondents, their information needs, their sources of information used and their attitudes towards these sources of information. Also, the respondents were asked to answer these questions in different ways. There were open and closed questions, as well as questions that implemented both open and closed answers. The closed questions in different parts of the questionnaire required answering in different ways. Some questions were of the multiple choice format. Others, attempting to measure respondent attitudes, utilized the Likert Scale.

The questionnaire underwent revisions in an attempt to avoid the pitfalls of question design and question wording such as: double-barreled questions; ambiguous questions; leading questions and; sensitive or threatening questions. When the University of Alberta researchers were

confident that the questionnaire was satisfactorily complete, it was field tested with the assistance of pork producers in the Edmonton area. When revisions were made, based on the guidance of these producers, a final copy of the questionnaire was drafted (Appendix 2).

3.2.2.2 Analysis of Data

The analysis of the data generated by the mail-out questionnaire consisted of following a planned process based on the objectives of this study. The computer package used was the Statistical Package for the Social Sciences: Version Ten (SPSSX mainframe version).

3.3 Telephone Interview Study

3.3.1 Objectives

The primary objective of using telephone interviews in this research was to increase the response rate from the sample selected by the researchers (Appendix 3). Through the implementation of telephone interviews, the data base with which researchers could investigate the primary objectives of this research study was expanded.

3.3.2 Procedure

This telephone interview study was designed with the respondents and the study objectives in mind. Its development consists of several components: the development of the interview form; the sample selection; the interviewing process; the coding and entering of the interview responses and; the analysis of the accumulated data.

3.3.2.1 The Interviewing Process

The interviews were conducted by several individuals associated with the research project. Telephone numbers were acquired by matching the names and addresses provided by the APPDC with producer names in telephone directories. Producers were then contacted by telephone. After citing the introduction on the interview form, the producers were asked for their cooperation in participating in the interview. If the producer was currently in the hog business, had not completed the mail-out questionnaire and, granted permission to be interviewed, then the interview proceeded. The producer was then thanked for contributing when the interview was terminated.

3.3.2.2 Analysis of Data

The analysis of the data generated by the telephone interviews consisted of following a planned process based on the objectives of this study. The computer package used was the Statistical Package for the Social Sciences: Version Ten (SPSSX mainframe version).

3.4 Sampling of a Population

Sampling is a common practice implemented when the size of the population is such that an exhaustive study can not be conducted. On the subject of sampling, Bailey offers some enlightenment by telling us that:

> ideally we would like to study the entire population in order to give more weight to results. ... Often, however, we are unable to study the entire population and must settle for a sample ... a sample is a subset or portion of the total population (and thus correctly,) ... a sample must be viewed as an approximation of the whole rather than as a whole in itself (Bailey 1987, pp. 81-82).

Once a researcher decides that a sample must be taken from the population, a choice of which nonprobability or probability sampling method to use must follow. Among the latter methods, "the probability of selection of each respondent is known (Bailey 1987, p. 87)." When utilizing the probability sample, a researcher has several methods to chose from; the simple random sampling method; the systematic sampling method; the cluster sampling method and; the stratified random sampling method. These four alternative sampling methods will be defined and discussed in the following four sub-sections.

3.4.1 Stratified Random Sampling

"Stratified sampling involves the division of a population into relatively homogeneous groups called strata and the selection of samples in each of those strata (Satin and Shastry 1983, p. 20)."

Satin further tells us that stratified sampling is a technique which uses information is in order to increase efficiency. The information used in this research project to divide the population of pork producers into strata was yearly hog output.

Advantages of stratified random sampling is that "stratified random sampling attempts to restrict the possible samples to those which are less extreme by ensuring that all parts of the population are represented in the sample (Satin and Shastry 1983, p. 20)."

3.4.2 The Sampling Process Used for this Research Project

The sampling frame used was provided by the APPDC. The APPDC has a file of the active pork producers in Alberta. This file is revised monthly: new producers are added to the file and those producers who have not marketed a hog through the APPDC in three years are removed from it.

The stratified random sampling method was implemented in this thesis research. The decision to implement this particular method of sampling was based primarily on the nature of the population to be sampled. Of the 6,693 active producers in 1988, a sample size of 600 was targeted. The problem that faced researchers was that the distribution of Alberta pork producers, with respect to yearly production, was skewed. The number of producers in Alberta with a yearly output of 5,000 head or greater constituted a group of 40 individuals (see Table 1.1). Conversely, the number of producers in Alberta with a annual output of 99 head or less constituted a group of 4,022 individuals.

The active pork producers of Alberta were divided into 8 strata, based on the number of head marketed through the APPDC in 1988. The yearly production categories chosen were: 99 head or less; 100-199; 200-499; 500-999; 1000-1499; 1500-2499; 2500-4999 and; 5000 or over. The number of producers in each of these groups were 4,022, 728, 828, 499, 244, 204, 128 and, 40, respectively[12].

A census was taken of the two latter producer groups. A random sampling formula was used to select the producers of the middle five producer groups. Very small proportion of producers from the "99 head or less" production group was selected. A small proportion of these producers were selected because researchers were told that this group of producers entered and exited the Alberta pork industry frequently and their contribution to total hog production in Alberta was minimal.

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12 See Table 1.1.

4 Review of Extension Services and Information Available to Alberta Pork Producers

4.1 Introduction

This chapter will provide a summary of the extension services and information available to Alberta pork producers. Four extension providing entities will be the focus of this chapter. These are: 1) the Alberta Pork Producers Development Corporation; 2) Alberta Agriculture; 3) Agricultural Business firms and 4) the University of Alberta.

These entities will be discussed in the context of information and services provided and the methods / media used to make these available to Alberta pork producers.

4.2 The Contribution of the Alberta Pork Producers Development Corporation Towards Extension for Alberta Pork Producers

4.2.1 Introduction

The Alberta Pork Producers Development Corporation (APPDC) provides a unique and specialized service to the Alberta pork industry. The APPDC was formed in 1968 as a result of a producer vote in favor of such an organization being established. Price (1980) tells us that "producers voted for the "Board" ... because they realized the need to be in the (hog) market with a position of some strength." He further adds that in the time period following the creation of the Board, that this entity "concentrated on getting the mechanics (of the market) operating and some efforts were (also) put into developing new pork markets and product promotion, plus research activities". Over time, the objectives of the APPDC have evolved and tempered somewhat. The current APPDC objectives are that of:

> ...marketing of all hogs produced for slaughter in the province of Alberta. Also, to enhance marketing opportunities for Alberta at the retail and consumer levels and assist in the study and research relating to production, marketing, quality improvement and consumption of pork products (Corporation Basics 1989[13]).

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13 The publication, *Corporation Basics* (File #042801), is formulated, updated and distributed by the APPDC as a source of information to those parties interested in the background, purpose and activities of the APPDC.

APPDC operates under the authority of the *Alberta Marketing of Agricultural Products Act*. This *Act* is supervised by the Agricultural Products Marketing Council which is appointed by the provincial government to oversee the operation of all marketing agencies within the province.

4.2.2 Services Provided by the APPDC

The Alberta Pork Producers Development Corporation provides numerous services to Alberta pork producers, ranging from accounting and information provision services, to marketing services, and representation of Alberta producers through several committees, associations and councils. More specifically, the APPDC provides the following services to the Alberta pork industry as specified by the Corporation Basics (1989). These services are; the daily marketing of hogs, the operation of five assembly yards, a toll free market information service, an in-transit voluntary insurance program for marketed hogs, a settlement system for all hogs sold, free accounting services for truckers and assemblers, support infrastructure for research projects of importance to Alberta producers, pork promotion and advertising programs, publishing infrastructure for the Western Hog Journal, a producer information service and the representation of producers through the APPDC representative infrastructure. The latter service will be developed in the following section.

4.2.3 Producer Representation Provided by the APPDC

The APPDC functions using a Board of Directors system. Of this system, Price (1980) states that "the Board of Directors is aware that , not only must they represent producers, but they must also provide leadership." He also suggests that because of this relationship that "most producers see the Board as the voice of the industry." This situation is fortunate because the APPDC, through producers which have taken chairman positions, represents the pork producers of Alberta in numerous councils, committees and alliances. The APPDC 1989-1990 Board Committee Representatives List[14] indicates that there are numerous (21) such entities. Of these, 14 provide external representation for Alberta pork producers. A short description of these 14 organizations will be offered in the following sections.

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14 This document (APPDC File #003501) outlines the various committees, councils and alliances as well as their respective chairmen through which the APPDC is represented.

As previously stated, pork producers of Alberta are represented in numerous councils, committees and alliances. The importance of this scenario should be highlighted by the fact that these affiliations provide an opportunity for information to be transferred back to producers. The two-way dialog which is possible through the representation mechanism must be stressed.

4.2.3.1 Agriculture Education Advisory Committee

The full name of this committee is the Agriculture Education and Rural Extension Committee to the AACC[15]. This is a sub-committee of the AACC, of which the general manager of the APPDC is the chairman. This committee makes recommendations to the AACC on matters regarding rural education and extension.

4.2.3.2 Alberta Agriculture Swine Industry Advisory Committee

The Alberta Agriculture Swine Industry Advisory Committee is a sub-committee of the Animal Industry Advisory Committee of the AACC. This committee is comprised of various industry members whose purpose is to liaise with Alberta Agriculture interests. This committee endeavors to keep abreast of current issues in the swine industry.

4.2.3.3 Alberta Feed Grain Users Association

This association discusses and develops common aspects of feed grain usage. This association also has input into the development of alternatives for the method of payment of the Crow Benefit Offset Plan.

4.2.3.4 Alberta Pork Industry Advisory Committee

The Alberta Pork Industry Advisory Committee is appointed by the Minister of Agriculture. The purpose of this committee is to advise the Minister on current pork industry issues. The APPDC Executive committee sits on the Alberta Pork Industry Advisory Committee.

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15 The Alberta Agriculture Coordinating Committee (AACC) is established by the Minister of Agriculture as a sub-committee of the Canadian Agriculture Service Coordinating Committee. The AACC's objectives are to: 1) provide a forum for discussion of policy and program areas of interest to the Alberta Agriculture industry; 2) advise the Minister, and through him the Federal Minister, and other agencies on matters related to agricultural policies and programs and 3) review current aspects of research, extension and rural education being conducted in Alberta.

4.2.3.5 Alberta Swine Improvement Board

This committee is administered by Alberta Agriculture. The APPDC is among the organizations with representation on this committee. This committee appoints two members to the Canadian Swine Improvement Advisory Board, which implements programs, formulates policy and administrates the national swine improvement program.

4.2.3.6 Animal Care Committee

The Animal Care Committee is an entity which is internal to the APPDC. It advises the APPDC on matters related to animal welfare. This committee works in conjunction with SPCA interests. The latter has been requested by the APPDC to inspect trucks, assembly points and slaughter plants.

4.2.3.7 Animal Health Advisory Committee to AACC

The Animal Health Advisory committee to the AACC is a committee which advises the AACC on matters pertaining to animal health issues.

4.2.3.8 Canadian Agriculture Policy Alliance

The Canadian Agriculture Policy Alliance is dedicated to finding a new method of payment of the Crow Benefit. This is an umbrella group which comes forth with united responses to policy. This group is made up of several like-minded organizations, such as those representing cattle, hog and poultry and feather producer groups.

4.2.3.9 Canadian Pork Council

The Canadian Pork Council is a national body which represents all of the Canadian pork boards and their memberships. This council deals with national issues, and is currently involved with issues related to the countervailing duties and drug residues. The Canadian Pork Council also acts as a political lobby group to national politicians.

4.2.3.10 Edmonton Chamber of Commerce: Agricultural Committee

The Edmonton Chamber of Commerce has an Agricultural committee. This committee was joined by two representatives of the APPDC during the Alberta "Hog Wars" of 1986. The objective at that time was to counteract misrepresentations made to the Edmonton Chamber of Commerce. Currently, this committee allows for broad dialogue and information to be spread to the Edmonton Chamber of Commerce.

4.2.3.11 Livestock Industry Institute

The Livestock Industry Institute is an entity based in the United States. The General Manager of the APPDC is a member of this body. The purpose of this institute is to improve the well-being of livestock and the meat industry by facilitating dialogue, exploring development, and disseminating information to industry interests and the general public.

4.2.3.12 Rural Education and Development Association (REDA)

REDA promotes rural extension and education by offering workshops, seminars and short courses. New directors and delegates of the APPDC participate in a development course offered by REDA.

4.2.3.13 National Tripartite Hog Stabilization Committee

As this entity's name suggests, the Committee provides the National Stabilization Program with advice and guidance. The Committee has federal and provincial government representation, as well as representation from producers. The APPDC is represented by one director.

4.2.3.14 Western Hog Marketing Committee

The Western Hog Marketing Committee is comprised of representatives from the British Columbia, Saskatchewan and Manitoba Hog Boards, as well as the APPDC. The primary objective of this committee is to discuss matters of concern, which are common to the pork industries of the western provinces.

4.2.4 Information Provided by the APPDC

Pork producers obtain a variety of information from the APPDC. In addition to daily market information (from a code - a - phone), used in the marketing of hogs, the APPDC also provides other services to the 6,693 Alberta producers who market live hogs. An update on APPDC activities and a short composition on timely topics are included with producer cheques.

Newsletters are sent to producers on a regular basis. These focus on current issues in the pork industry, serve to remind producers about meetings, and to keep producers informed about the APPDC's activities.

The APPDC publishes an Annual Report which provides information and figures relating to the previous calendar year. The APPDC Annual Report also highlights key events in the industry for that year. All current pork producers receive this publication.

The APPDC also publishes a magazine called the Western Hog Journal. Every current Alberta pork producer receives this publication on a quarterly basis. The Western Hog Journal contains articles, contributed by various information producing sources, which relate to different facets of the pork industry.

There are individuals on the APPDC staff who deal with complaints, questions and concerns which a producer may have with cheques or grading assessments from hog shipments. Upon request, APPDC staff may also assist producers with concerns which they may have. This may mean referring the producer to an appropriate government department or private industry interest.

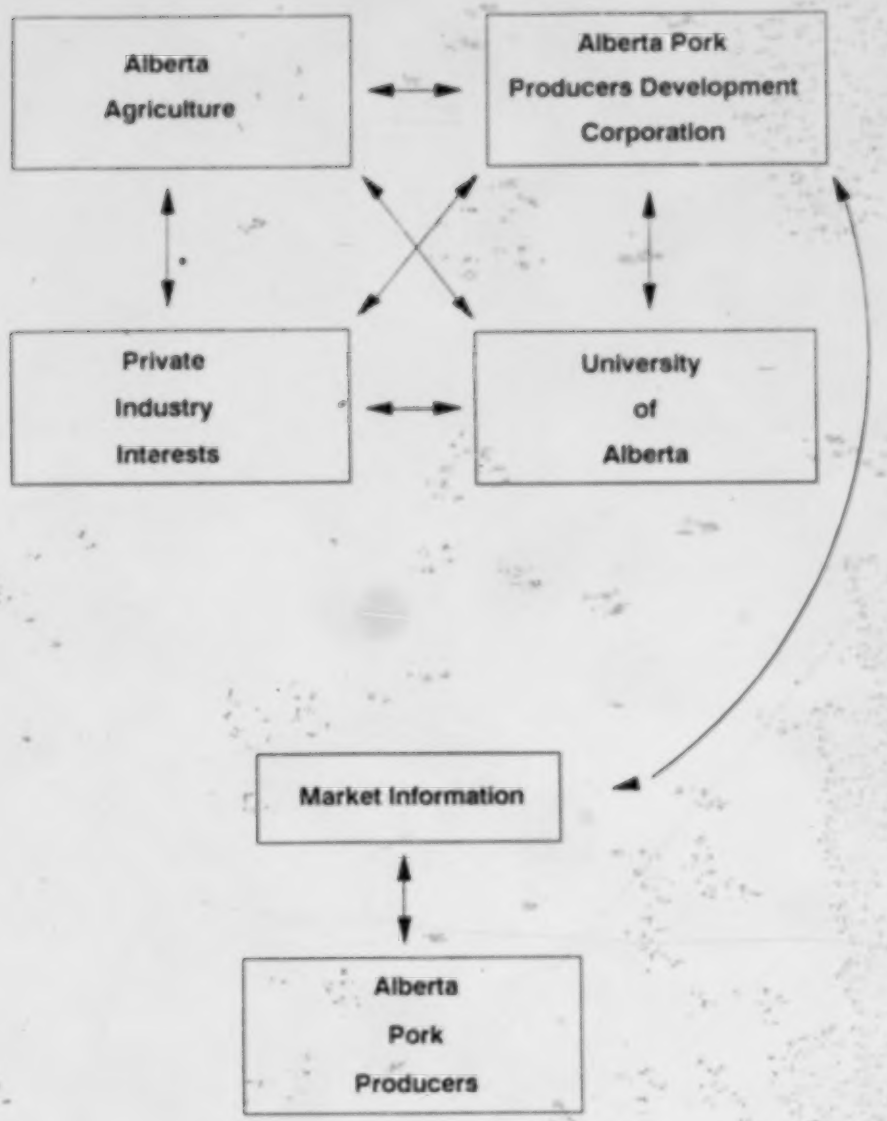
The APPDC is involved in the marketing and merchandising of their product. They are constantly trying new techniques and strategies for expanding the potential market for both fresh and packaged pork. Information is available on the nutritional aspects of pork to both the producers and consumers via either the APPDC or the particular food merchandiser or retailer with which the individual is dealing.

4.2.5 Summary

The APPDC primarily generates and supplies marketing and market related information and the service of being an Alberta pork marketing facilitator (see Figure 4.1). The APPDC does not directly generate information for Alberta pork producers on matters pertaining to herd health, housing or nutrition. However, the APPDC does contribute to research and facilitate the transfer of information from various sources through the publishing of the Western Hog Journal.

Figure 4.1

Information from APPDC to
Alberta Pork Industry



4.3 Alberta Agriculture's Extension Contribution Towards the Alberta Pork Industry

4.3.1 Introduction

Alberta Agriculture provides a variety of information and services to Alberta pork producers. There are numerous divisions that interface with Alberta's pork production industry to one extent or the other; this section will outline the structure and function of Alberta Agriculture as it relates to the pork producer.

The best strategy towards the understanding of the structure, departmental delineation and the different information services offered by Alberta Agriculture is to follow an organizational chart. The organizational chart (Figure 4.2), sourced from Alberta Agriculture, was current as of February, 1990. It depicts the structure of Alberta Agriculture and outlines the administrative hierarchy.

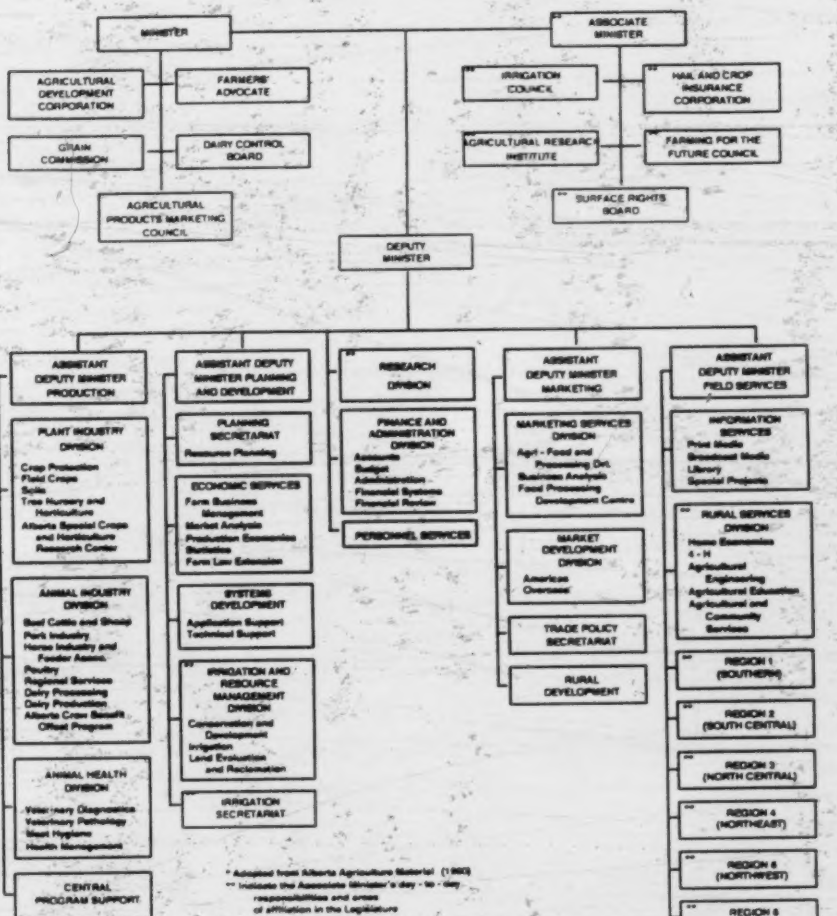
The Minister and Associate Minister of Agriculture are responsible for the functioning of Alberta Agriculture; however, the administrative system is decentralized, with many levels of control. The Minister of Agriculture is also directly involved with several councils and boards. Those that periodically involve the pork industry are the Agricultural Products Marketing Council, the Farmers' Advocate and, the Agricultural Development Corporation. The latter is a lending institution which interfaces with the Alberta pork industry via loans and collections. In addition, specific projects and issues relating to the pork industry are dealt with by the Ministers of Agriculture and their support infrastructure.

The Associate Minister of Agriculture liaises with the Minister and is also directly responsible for several organizations. Such organizations include, the Farming for the Future Council, the Alberta Agricultural Research Institute and, the Hail and Crop Insurance Corporation.

The Deputy Minister of Agriculture has four Assistant Deputy Ministers and several divisions to administer. Each one of these sectors is involved in the pork industry to some degree. The balance of this section will follow the organizational chart (Figure 4.2) from left to right, highlighting the divisions and branches which are involved with the pork production industry.

FIGURE 4.2

Alberta Agriculture
Organizational Chart (1990)



4.3.2 Production Sector

The Assistant Deputy Minister of Production is the administrative head of three divisions: Animal Industry: Animal Health; and Plant Industry. The Central Program Support will also be included although it is not labelled to be a division.

The Production Sector's primary objective is:

> to promote economic production of crops, livestock and poultry through the use of husbandry practices which maximize efficiency and are consistent with conservation of Alberta's land and water resources (Alberta Agriculture Annual Report 1987-1988, p. 23).

4.3.2.1 Animal Industry Division[16]

The Production Sector contains the Animal Industry Division which is divided into several branches. There is a specific branch, the Pork Industry Branch, which administers and operates programs focused on the Alberta pork industry (Figure 4.3). Much of the information made available to pork producers is researched, edited, and published by this branch. The Pork Industry Branch, in conjunction with the Alberta Swine Specialists[17], generate and provide producers with information on pork production technology, marketing, financial management, record keeping and computerized technology. Included among these are a program for genetic improvement, a computerized recording system to monitor productivity, the sale of swine semen and, training in A. I. proficiency. Also, a swine production home study course[18], Alberta Pork Production Handbook, and a variety of seminars and courses relating to hog production are administered by this branch.

The programs and resources are developed jointly by the branch staff specialists, the Regional Swine Specialists and extension staff. The branch in conjunction with Swine Specialists developed a comprehensive swine record keeping system called the Alberta Swine Record System. Approximately 500 producers used this system in 1987-1988. It can be obtained through Swine Specialists and the local District Agriculturists (D. A. 's.) or by contacting the branch. The home

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16 Mr. Fred Schuld, Head of the Pork Industry Branch, and Mr. Bert Dening, Regional Swine Specialist, are thanked for their co-operation and valuable input into sections concerning "Alberta Agriculture's Extension Contribution".

17 The close relationship between the Pork Industry Branch (from the Production Sector) and the Alberta Swine Specialists should be recognized. The latter are directed by their respective regions which are under the Assistant Deputy Minister of Field Services (see Figures 4.2, 4.3 and 4.4).

18 The swine production home study course is distributed by REDA.

study course offered attracted about 300 participants in 1987-88. Again, more information can be obtained on these information sources by contacting the local D. A. or a Swine Specialist. The Alberta Pork Production Handbook is a source of varied information which contains approximately 80 factsheets. It was coordinated by the branch and produced by various specialists; they continue to prepare regular supplements. There were over 1,800 subscribers in 1987-88. The specialists and branch staff also contribute articles and a column for the Western Hog Journal which has a circulation of approximately 21,000. Staff specialists also write and research various pork related publications which are available to the farmer through the local D. A.

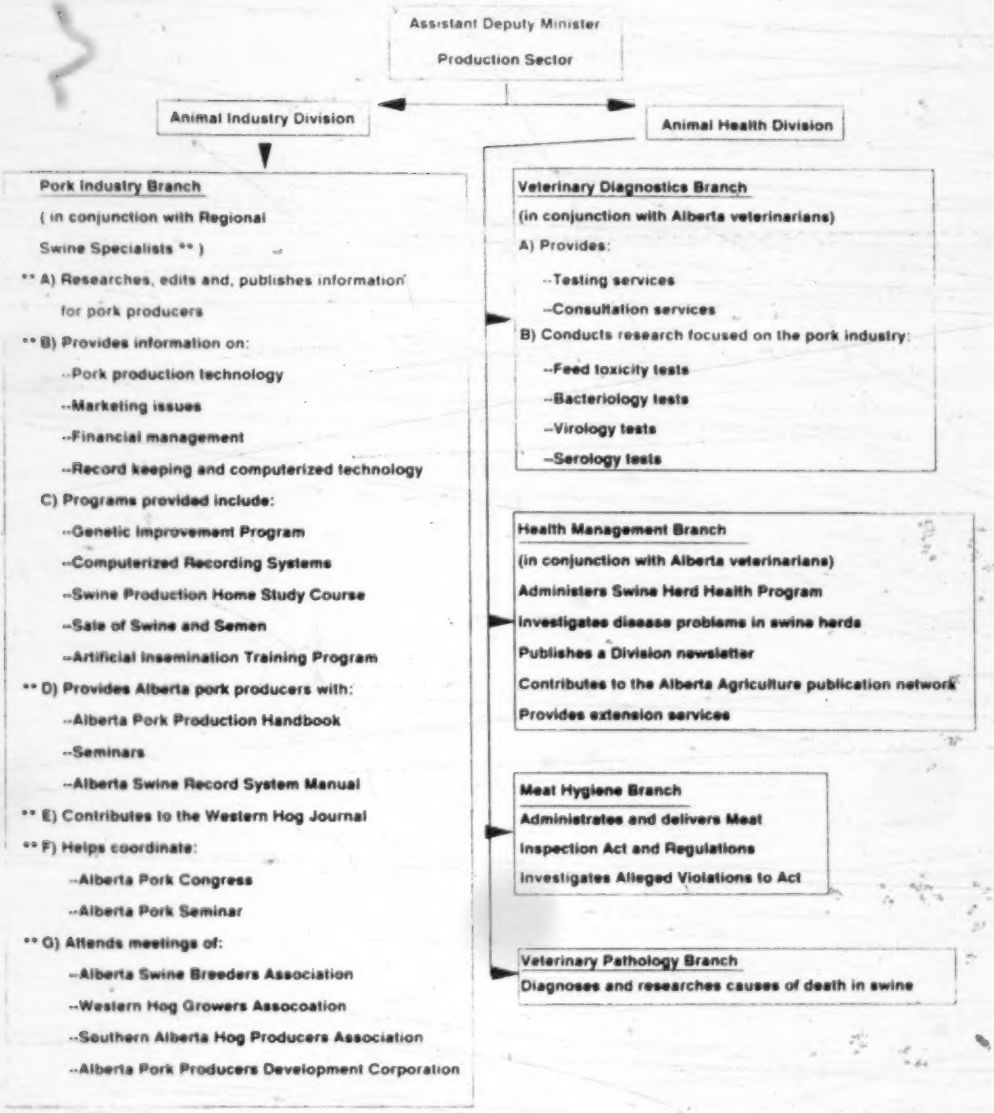
Branch staff and regional specialists contribute significantly to the annual Pork Congress (3,500 attending in 1988), the Alberta Pork Seminar (175 attending in 1988) and three regional swine breeding seminars (300 attending in 1988). Pork Industry Branch staff specialists attend meetings of the Alberta Swine Breeder's Association, the Western Hog Grower's Association, the Southern Alberta Hog Producer's Association, and the Alberta Pork Producer's Development Corporation district and annual meetings.

Further, branch staff and regional specialists and others have designed computer spreadsheets for analysis of cash flow projections, credit requirements, farm records and feed rations. Various other software programs are recommended to producers by the Swine Specialists and the branch staff.

The Alberta Swine Artificial Insemination program is administered from the Swine Breeding Center near Leduc. The center collects and sells both fresh and frozen semen for domestic and export markets. The primary emphasis of the A. I. program has been to help make superior genetics more widely available to the industry. Information regarding insemination techniques, progeny data on performance tested boars, and semen handling can be obtained by contacting the center. Swine breeding management short courses are frequently given by the A. I. Center staff at regional colleges, and some district and regional locations. Regional Swine Specialists help organize and conduct these courses. Research on semen preservation methods and use continues at the center: new developments are utilized by the center and are presented at the short courses. Over 300 producers make use of this service annually.

Figure 4.3

Animal Industry and Animal Health Divisions


Assistant Deputy Minister
Production Sector
Animal Industry Division
Animal Health Division
Pork Industry Branch
(in conjunction with Regional
Swine Specialists **)
** A) Researches, edits and, publishes information
for pork producers
** B) Provides information on:
--Pork production technology
--Marketing issues
--Financial management
--Record keeping and computerized technology
C) Programs provided include:
--Genetic Improvement Program
--Computerized Recording Systems
--Swine Production Home Study Course
--Sale of Swine and Semen
--Artificial Insemination Training Program
** D) Provides Alberta pork producers with:
--Alberta Pork Production Handbook
--Seminars
--Alberta Swine Record System Manual
** E) Contributes to the Western Hog Journal
** F) Helps coordinate:
--Alberta Pork Congress
--Alberta Pork Seminar
** G) Attends meetings of:
--Alberta Swine Breeders Association
--Western Hog Growers Assocoation
--Southern Alberta Hog Producers Association
--Alberta Pork Producers Development Corporation
Veterinary Diagnostics Branch
(in conjunction with Alberta veterinarians)
A) Provides:
--Testing services
--Consultation services
B) Conducts research focused on the pork industry:
--Feed toxicity tests
--Bacteriology tests
--Virology tests
--Serology tests
Health Management Branch
(in conjunction with Alberta veterinarians)
Administers Swine Herd Health Program
Investigates disease problems in swine herds
Publishes a Division newsletter
Contributes to the Alberta Agriculture publication network
Provides extension services
Meat Hygiene Branch
Administrates and delivers Meat
Inspection Act and Regulations
Investigates Alleged Violations to Act
Veterinary Pathology Branch
Diagnoses and researches causes of death in swine

The Alberta Swine Improvement Program primarily provides technical services for seedstock producers in order for the latter to identify leaner and faster growing breeding stock. The Alberta program is part of the federal-provincial program which operates in all of the provinces. The information generated from this program is published in order that commercial producers can purchase animals which exhibit superior genetics in these traits. This program also provides information and extension activities in breeding stock selection and management. In the future, the breeding stock selection program will be expanded to include sow productivity traits.

The Pork Industry Branch identifies research needs which are conducted within the Animal Industry Division. The branch also works in conjunction with the feed testing laboratory and staff at the O. S. Longman Building. Also located in the O. S. Longman Building is a monogastric nutritionalist and support staff. Activities pertaining to swine account for approximately 80% of the nutritionalists' workload.

The Alberta Crow Benefit Offset Program is part of the Animal Industry Division. As of March 31, 1989, there were over 26,000 Alberta feed users registered in this program. The Animal Industry Division Annual Report (1988-89) estimates that over 48 million dollars was transferred between April 1, 1988 and March 31, 1989. Grain is an important input used in the production of hogs in Alberta.

4.3.2.2 Animal Health Division

The goals of the Animal Health Division include enhancing the profitability of livestock producers and associated agribusinesses and to aid in the protection of animal and human health and enhance their well-being. Five branches support these objectives (Figure 4.3); all relate to pork production in some capacity.

The Veterinary Diagnostics Branch, located in Edmonton, has diagnostic laboratories to aid in disease diagnosis and surveillance. Complete and up-to-date testing services are available to Alberta pork producers. Also, their veterinarians will provide special consultation services for special cases on the farm unit. There are a variety of research projects currently in progress, including feed toxicity bacteriology, virology and serology tests. The Regional Laboratories, which are part of this branch, offer a similar line of services. These laboratories are located in Lethbridge, Airdrie and, Fairview.

The Health Management Branch is involved with the Swine Herd Health program. Veterinarians are contacted for the visitation of swine production units enrolled on this program. The branch will investigate disease problems in operations at the request of the local veterinarian. The branch functions to research and monitor, as well as to provide extension services to producers, veterinarians, and industry in animal health topics. The branch publishes an animal health division newsletter, as well as contributes to the publication network available through any Alberta Agriculture office.

The Meat Hygiene Branch is responsible for the administration and delivery of the Meat Inspection Act and Regulations. In 1987-88 it inspected approximately 111,000 hogs. It also investigates alleged violations of the Act and enforces those deemed true.

The Veterinary Pathology Branch is involved with the diagnosis and research on the causes of death and production losses of livestock and/or wildlife. Livestock producers can send in their animals or samples of such for analysis and explanation. If a pig dies of an unknown cause, the producer may send it in to this branch for analysis. The results will be given to the farmer and his veterinarian in order that preventative measures can be taken.

4.3.2.3 Plant Industry

The Plant Industry Division has limited direct interface with pork production in Alberta. However, since most pork producers also produce crops, for feed or marketing purposes, there are indirect links with pork production. For example, pork producers may initiate and partially fund barley breeding at the Lacombe plant breeding center. The desired objective being, to develop a variety of barley which could enhance pork production.

4.3.2.4 Central Program Support

This division is responsible for the implementation, delivery and administration of long-term agricultural stabilization programs. The Alberta Farm Credit Stability program and the Red Meat Stabilization program are the programs that particularly affect hog producers.

The Farm Credit program exists to stabilize the cost of credit to producers. This program presently allows Alberta producers to refinance farm-related debt as well as borrow money for acquisitions and improvements to make the operation more productive.

The Red Meat Stabilization is in place to reduce the fluctuations in returns to producers in a variable marketplace. The cost of the scheme is shared equally between the Government of Canada, the Government of Alberta, and the participating producers. Producers can contact their local D. A. 's office to receive information on any of these programs: they may apply at the district or provincial levels of Alberta Agriculture in order to receive their benefits.

4.3.3 Planning and Development Sector

The Assistant Deputy Minister in charge of the Planning and Development Sector deals with the pork industry to a limited extent through its various divisions.

> The Planning and Development Sector is designed to ensure close co-ordination of economic and planning services contributing to a viable agricultural community with the planning and development of agriculture's most basic resources: land: soil: and water (Alberta Agriculture Annual Report 1987-1988, p. 11).

The Planning Secretariat in conjunction with private industry work toward provincial agricultural policy development. Included in the policy which it formulates is that for the Red Meat Tripartite Stabilization and the Crow Benefit Offset programs, which affect Alberta pork producers.

The Economic Services Division works on economic, financial, legal, marketing, and taxation issues relating to agriculture. This division delivers their information through special programs, conferences, branch publications, media and Field Services. It also trains and advises department staff. Some of the informational sessions offered are the Gear Up Advantage course and the Managing Agricultural Technology for Profit conference held in Kananaskis, Alberta. This division also organizes workshops for lenders, accountants and lawyers in an attempt to keep these professionals up-to-date on agricultural issues.

The Production Economics Branch studies production costs and returns associated with the production of hogs. This branch accomplishes this by monitoring between 50 and 60 hog operations in Alberta.

The Market Analysis Branch has an infrastructure established through which it collects sale prices and volumes for various commodities. Using this information, the Market Analysis Branch develops *The Weekly* which is available to producers.

The Farm Management Branch provides advice on computer software systems needed for production documentation and record keeping purposes. This branch also offers a financial counselling service to Alberta producers.

4.3.4 Divisions Administered by the Deputy Minister

The Deputy Minister is directly in charge of three divisions. These include the Research Division, the Finance and Administration Division, and the Personnel Services. The Research Division interfaces with the pork industry. It is responsible for the managing of research grant programs, planning agricultural research, evaluating research projects and disseminating new research information. A program of the division which relates to the pork producer is the "Farming For The Future" research program. It uses Heritage Trust Fund monies to support it's projects; there are a wide variety of projects currently underway. Some of them relate directly to the pork producer. Examples of these could include projects on new types of feeds, feeding methods, and housing alternatives. The Research Division contributes to the Country Guide and publishes the Farming For the Future Progress Report and Research Report. The latter publication deals with the results of current developments in agricultural research. The Research Report is specifically written and designed to inform producers, extension workers and the general public. Pork producers may inquire about these reports at their local D. A. 's office. The Research Division recently assisted in the creation of the Alberta Agriculture Research Institute.

4.3.5 Marketing Sector

An Assistant Deputy Minister is in charge of Marketing. The Marketing Services Division is involved with the production, processing and marketing of value-added Alberta food products. The primary goals of this sector are:

> to provide assistance to producers, processors, and marketers in response to the needs of the agriculture industry in Alberta, and to offer developmental and support services to processors and marketers of agri-products with the objective of adding value and improving the marketability of products of primary agriculture producers (Alberta Agriculture Annual Report 1987-1988, p. 71).

Contained within the Marketing Services Division is the Agri-food and Processing Development Branch which provides help for those processors and individuals looking to improve the marketability of agricultural products either directly or through value-added processing techniques. The Agri-food Development Section attempts to assist the commodity industry and breed organizations deal with the current issues and development concerns in the industry. The

Meat and Dairy Development Section supports the expansion of value-added marketing through new processing developments for meat and milk products. The Processed Food Section and Business Analysis area deal directly with the food processing industry, researching and encouraging further value-added development.

The Market Development Division is responsible for international marketing ventures and for investigating the potential for profit from marketing Alberta food products abroad. The Trade Policy Secretariat works toward ensuring the existence of an effective trade policy framework under which Alberta's agriculture and food industry can grow and prosper. This area has been dealing mainly with the Canada - U. S. Trade Agreement and the General Agreement on Tariffs and Trade during the recent past.

The above activities impact the pork industry, either through policy formulation, marketing board or commission regulations, new processing or packaging techniques, or new value-added opportunities. The producer can keep up-to-date on much of this information by reading agricultural publications and by attending producer meetings and seminars. Commodity groups may deal with these administrative bodies in pursuing their respective interests.

4.3.6 Field Services Sector

An Assistant Deputy Minister is in charge of the Field Services Sector. The Alberta Agriculture Annual Report indicates that the primary objectives of this sector is "to deliver technical and management information and services to Alberta's rural population (1987-1988, p. 39)."

There are 66 district offices, that are administered and supported by 6 regional offices, which work at accomplishing these objectives. The sector is also comprised of two divisions: Rural Services Division; and the Information Services Division. All three of these entities[19] are involved with Alberta's pork production industry (Figure 4.4).

4.3.6.1 Rural Services Division

The Rural Services Division consists of several branches which are involved with the pork production industry. These include; the Home Economics Branch, the 4-H Branch, the Agricultural Engineering Branch, the Agricultural Education Branch and, the Agricultural and Community Services Branch.

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19 That is, the Rural Services Division, the Information Services Division and the Regions.

Traditionally, the Home Economics Branch has undertaken activities such as providing pork recipes as well as information on meat storage, meat cuts, and preparation methods to the rural population. Currently however, this branch emphasizes the extending of business communication skills, consumer education, product promotion, nutrition and, food safety education and communication.

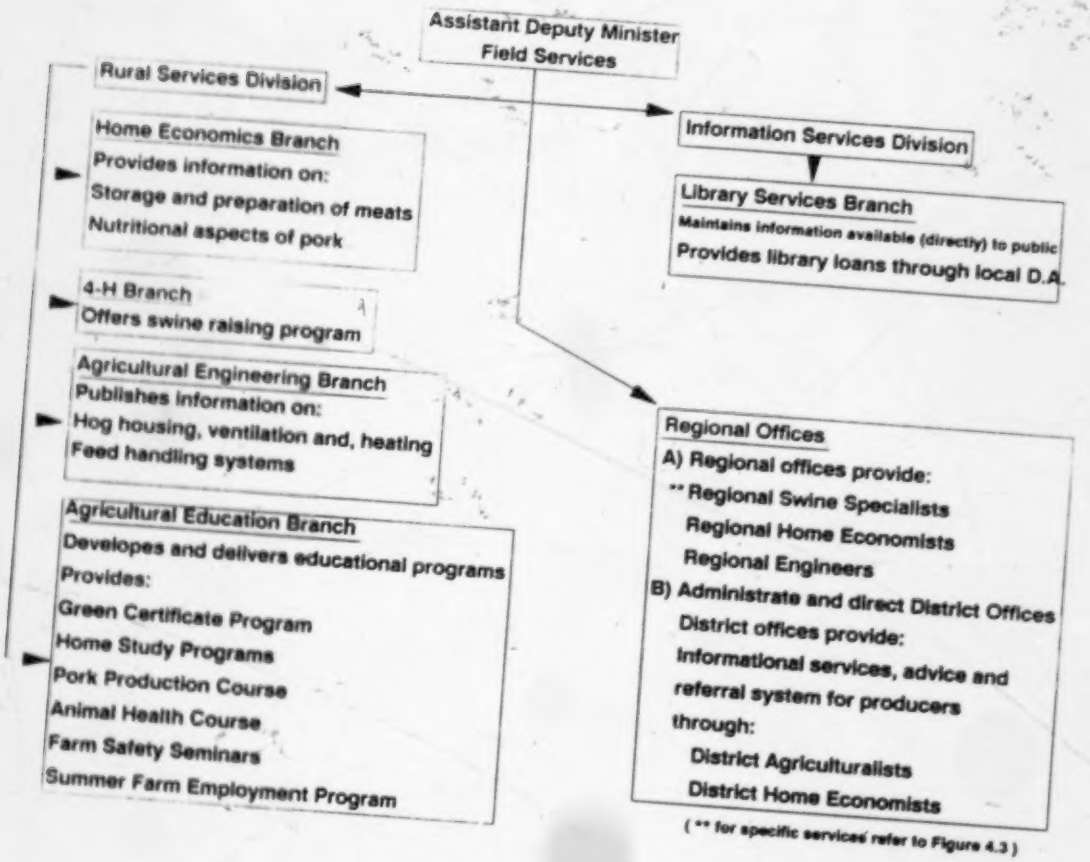
The 4-H Branch administers many different programs and projects. There is a swine program in which 4-H members can participate -- this is a comprehensive learning package on hog health, management, breeding, and marketing. It caters young Albertans between 13 and 21 years of age. Information on this project can be obtained through a D. A., regional 4-H specialist or the 4-H branch at the provincial level.

The Agricultural Engineering Branch maintains professional engineers on staff who are knowledgeable about livestock feeding equipment, housing and waste management facilities. This branch generates and publishes information on hog housing, ventilation, heating, feed handling and, waste management systems. These publications can be accessed through the district offices, regional engineers or branch specialists.

The Agricultural Education Branch relates to the pork industry via home study programs, Green Certificate program and other services. This branch develops and delivers educational programs to support the activities in field services. The Green Certificate Program provides training in technical and managerial skills to aspiring farm managers and laborers. Some pork producers participate in this program by providing their time and skill to train aspiring hog technicians and producers. There are also home study programs, distributed by REDA, which are used by farm families and agribusinesses. Courses that relate to hog technology are the Pork Production Course and the Animal Health Course. Farm safety seminars and workshops are also held at various locations for farmers and their employees. The Agriculture Manpower Program develops work experience programs for both teenagers and students pursuing a post-secondary education. Pork producers can take advantage of these programs by hiring the fore-mentioned individuals. Information regarding any of these programs or courses can be obtained through a D. A..

Figure 4.4

Field Services Sector Flow Chart



4.3.6.2 Information Services Division

The primary function of the Information Services Division is publishing the information generated by the various branches within Alberta Agriculture and distributing this material via the Regions to pork producers. The Library Service branch has a wide variety of information which is available to and used by department staff, students, and interested members of the public. The information may be available in the form of publications, films, videos, etc.. Specific articles and documents can be obtained on loan by contacting the D. A. or the Alberta Agriculture library.

4.3.6.3 Regional Offices

Throughout this section, there has been considerable reference to the availability of information at the district level which has been generated by Alberta Agriculture. The District Agriculture offices are a frequent site of contact between Alberta Agriculture and the pork producers of Alberta. The infrastructure that Alberta Agriculture has in place is decentralized. As a result, most pork producers within Alberta are within a reasonable distance from one of the 66 district offices. These offices function as dissemination centers for the quantities of production and management information which are generated by and available from Alberta Agriculture.

District Agriculture offices are staffed (at minimum) with a District Agriculturist, a District Home Economist, a stenographer, and occasionally additional support staff required for various programs. When a pork producer has a question or concern, he or she may go to the district office for information and advice. If the question cannot be dealt with directly by district staff, an appropriate specialist may be asked to aid the staff or the producer. Examples of this process would be if the pathology branch was approached to determine the cause of a death of an animal, or if the engineering branch was sought for advice on the effectiveness of a new ventilation technique, or if a swine specialist was contacted for advice on management or production technology.

There are 6 regional Alberta Agriculture offices in the province from which teams of resource specialists operate. Regional Farm Economists provide economic counselling and analysis including information on financing and estate planning. The Regional Engineers, who also operate from their respective regional offices, are sources of information on waste management

systems, barn designs, and feed and ventilation systems. Pork producers can be referred to these individuals through their local D. A.. After the initial contact has been established, direct contact between producers and the specialists continues.

There are four Regional Swine Specialists who provide services to the pork producers of Alberta (see Figures 4.3 and 4.4). These individuals deal specifically with pork production technology and management, and are also knowledgeable on technical aspects of the swine industry. The Swine Specialists use four main methods of interfacing with the pork producers of Alberta. These are through the use of telephone calls, farm calls, office interviews and producer meetings. In 1988, approximately 2,400 telephone calls, 320 farm calls and, 560 office interviews were recorded by the four Swine Specialists. In addition, over 60 meetings were attended. These meetings, with collections of 10 to 150 producers, may be expressly gathered to hear a Swine Specialist present a topic. In the case of the larger meetings however, a Swine Specialist may be one of several speakers.

The Swine Specialists also attend the Alberta Pork Congress, and the Banff Seminar. They interface with lending institutions such as the Alberta Development Corporation, the Farm Credit Corporation and banks, where they assist in the reviewing of loan applications and cash flow projections. Finally, there is regular contact, which constitutes a two-way information flow, between Swine Specialists and private industry representatives.

On-farm demonstration projects are administered and funded at the regional level of Alberta Agriculture. In 1989 there was a total budget of $100,000 allocated for demonstration projects in each of the six Alberta Agriculture regions.

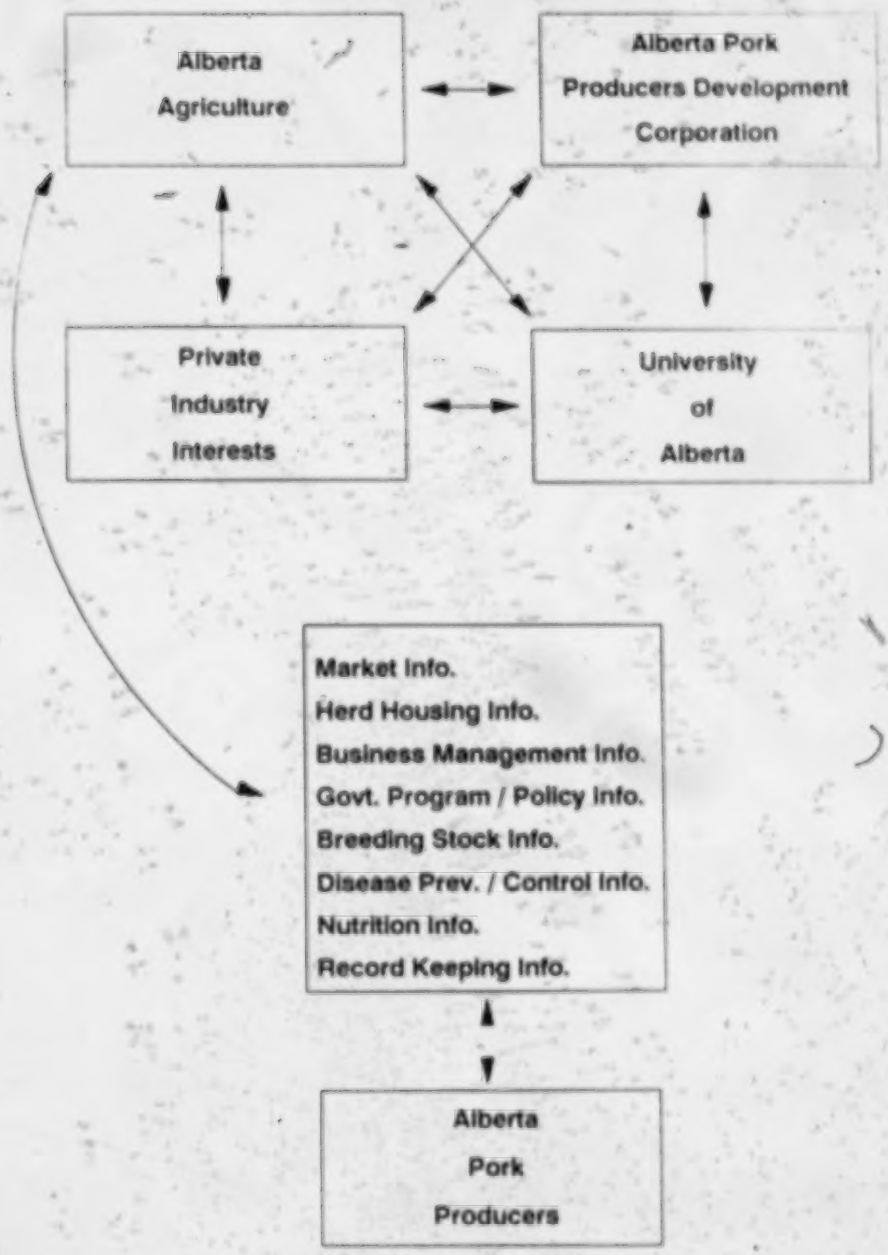
4.3.7 Summary

Alberta Agriculture has an extensive infrastructure for providing a range of information and services to Alberta's agricultural producers. There are numerous divisions that interface with Alberta's pork production sector. This review of Alberta Agriculture's infrastructure has outlined the organizational structure and function of Alberta Agriculture as it contributes to the information needs of pork producers (see Figure 4.5). The organizational chart of Alberta Agriculture (Figure 4.2) was used as an outline for this portion of the extension provision review.

Figure 4.5

Info. from Alberta Agriculture

to Alberta Pork Industry



4.4 The Contribution of Agribusiness Firms To Pork Industry Extension[20]

4.4.1 Agribusiness Marketing: An Extension Impact

The agricultural service industry in Alberta provides pork producers with the products and services needed to maintain a viable farming operation. This industry also plays a major role in the transfer of information to pork producers. Norby (1990) tells us that the ultimate goal of this industry is to market its product, either a physical product or service, as dictated by the marketing mixes of the respective firms. This goal is achieved by providing the consumer with a quality product, in a particular location, at a particular price and, by the promoting of their products or services (Figure 4.6). Norby suggests "that promotion is perhaps the most important of the four sub-mixes from a commodity group standpoint since the first three sub-mixes (price, place and product) are largely predetermined by external and uncontrollable forces (Norby 1974, p. 41)."

A firm's "Promotional Mix" (Figure 4.6) consists of several activities: advertising; personal selling; sales promotion; publicity and; packaging. These promotional activities may be engaged individually or integrated in order to meet the marketing objectives of the given firm. Norby indicates that the objective of these "communicative tools" is to "inform consumers of the particular product and to persuade them to purchase it (Norby 1974, p. 40)."

Current pork producers are engaged in a risky and competitive business, in a market which functions largely beyond their control. These producers are required to invest large sums of money to start and keep an operation viable; it is because of this capital investment involved that producers require a quality product, along with quality information and services from the firms being dealt with.

Not only is the primary agriculture sector today highly specialized and technical, it is a people-oriented industry. The agribusiness sector accommodates this scenario by combining the latest research and innovations with knowledgeable, people-oriented marketing and service staff. The ability to effectively transfer the latest ideas from research to the agricultural community is a key to a profitable agribusiness enterprise. The remainder of this section will be devoted to

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20 University of Alberta researchers would like to express their appreciation to Mr. R. R. Norby for his comments on this section.

Figure 4.6

THE MARKETING MIX

Adapted From: Norby; "Pork Promotion by Producers - An Evaluation", 1974.

providing a general overview of the information dissemination approaches undertaken by agribusiness firms. The five components comprising the "Promotional Mix" will provide the framework for this discussion.

4.4.2 Advertising

Advertising is a information transfer method used by the agricultural service industry. Advertising by means of print media such as newspapers, magazines, brochures, journals, and posters; and/or television and radio media all provide opportunities to inform and influence the producer.

Advertising is defined by Graham (1969) as

> the non-personal communication of a sales message to actual or potential purchasers by a person or organization selling a product or service, delivered through a paid medium for the purpose of influencing the buying behavior of those purchasers (Graham 1969, p. 9).

Norby (1974) also suggests that advertising is generally aimed at large audiences and that the person or organization doing the advertising has more control over advertising message than when utilizing personal selling. Advertising differs from other selling efforts in that it is non-personal, paid for and, has a sponsor.

4.4.3 Personal Selling

Personal selling as described by Norby involves personal interaction between sales representatives and potential purchasers. He also indicates that personal selling is a flexible means of promotion in that its approach can be tailored to potential purchasers. Graham tells us that personal selling is the "process of assisting or persuading a prospective customer to buy a commodity or service or to act favorably upon an idea that has commercial significance to the seller (Graham 1969, p. 398)."

Agribusiness firms rely heavily on this technique and their marketing strategies and associated information extension can generally be broken down into two basic techniques: the indirect or direct approach. Firms tend to utilize both in order to optimize results. Direct selling involves direct contact with producers, whereas indirect selling uses an intermediary as a contact/information source.

4.4.3.1 Direct Sales Approach

Firms which utilize the direct selling method (such as feed and veterinary pharmaceutical companies) often have an extensive sales force which covers a given territory, establishes contacts and looks for new sales opportunities. Company representatives contact producers directly; the most common approach is by farm visits. With this type of structure, the district sales representative is the resource person that a producer can contact if there are questions or problems pertaining to a product or service. Sales representatives are selected and trained so that they will be able to answer the concerns on their own. In addition, they have the firm's infrastructure which provides for additional company resource people to be enlisted in the problem-solving process. For example, feed and pharmaceutical companies have a research and development structure and laboratories that accommodate the needs of pork producers.

4.4.3.2 Indirect Sales Approach

When implementing the indirect selling approach, the firm interfaces with the producer through an intermediary, be it a farm equipment dealer, a veterinary office, a feed retailer, or even another farmer. There is only limited contact between the pork producer and the company representative per se: the farmer receives information via a middleman. Dealers and retailers are provided with the necessary information from the company and have the resources to act as an information source regarding the product or service. If a producer and a dealer cannot reach an agreement pertaining to the product, the company may be contacted in order to remedy the situation. With an indirect system, the salesman will spend his time travelling to different distributors, giving them the new information and resources to facilitate the marketing process. The representative will learn of producer concerns or comments through the middleman and take this information back to the company where it may be used in planning future marketing strategies.

Most companies provide after-sales services for their products. In the agricultural industry, clients often need a particular product or service on a regular basis; these customers will only continue purchasing if the associated service and support is good. Prices tend to be similar for comparable products within an industry. For this reason, service and information provided by a firm is considered to be an important marketing tool: service is often the final decision making

factor when a producer chooses a firm to deal with. If a problem occurs with a product or service, conscientious organizations will deal with it promptly, either directly or indirectly via their dealers.

4.4.4 Sales Promotion

Graham describes sales promotion as being "those sales activities that supplement both personal selling and advertising, and coordinate them and help make them effective, including point-of-purchase displays, shows, expositions and demonstrations (Graham 1969, p. 387)." Norby (1974) further adds that sales promotion refers to any promotion, other than packaging and publicity, that supports and enhances advertising and personal sales activities.

Sales promotion is a preferred form of promotion used by agribusiness firms in Alberta in order to secure business contacts. The agribusiness community readily attends agricultural trade fairs, conventions and congresses for this purpose; several major events may be attended by a particular company. Firms will staff their display/presentation booths with professional employees who are knowledgeable about the product and/or service and how it relates to the swine industry. In addition, companies provide a selection of promotional/informational items for an interested client to take home and evaluate. Companies attend these events in order to establish personal contacts with potential clients which can be pursued at a later date.

A sales promotion technique involving public relations is employed by agribusiness firms in order to establish good reputations and industry exposure. Visibility at livestock shows, community functions, and farming seminars by agribusinesses is important when trying to establish a reputable and well-known name. Many companies send representatives to community events, livestock shows, and banquets to talk with people on a casual basis and provide an opportunity for farmers to ask questions and discuss business matters.

Another sales promotion technique implemented by agribusiness is that of promotional giveaways, bonuses and draws. Companies budget specifically for this type of promotion. This attracts producers to the display booth or sales representative to receive the promotional item. At this time, the producer can ask questions about the product or service available and become acquainted with the company representative.

Results from current research which has been undertaken by agribusiness firms are also a source of information for Alberta farmers. Generally, research is initiated by government interests or by companies themselves. Occasionally, research is a cooperative effort. Published data/results are made available to the producer by direct distribution from a company representative or from a dealer (such as the veterinarian or the feed mill). Some companies organize tours and demonstrations of their research efforts for farmers to attend.

Producer meetings provide an opportunity for farmers and industry personnel to gather together and exchange ideas, opinions, and information. Some companies will cooperate with organizations like Alberta Agriculture or local veterinary clinics to coordinate the meeting. Conversely, Alberta Agriculture might organize the meeting and invite several different companies to come and give short presentations followed by a discussion period. Whether company or government facilitated, industry representatives recognize producer meetings as effective extension aids. Producers from a community meet and share ideas and information. After the meeting is over, the attending producers continue to discuss the ideas when they meet informally. The objective of these meetings is that hopefully some producers will try the new product or service. If the trial is successful other producers will soon become aware of it, and possibly proceed with the adoption process.

Companies also employ indirect methods of supplying information to producers. To accomplish this, companies train others to supply information to the producer. For example, firms hold informational session for government specialists or dealers who are promoting/retailing a given product or service in order to give them training on potential uses, applications and problems that may arise as a result of the innovation acceptance. By employing this strategy, it is the specialist or dealer who provides company information to the farmer instead of the company itself.

4.4.5 Publicity

Publicity is a recognized tool in the promotion strategy of agribusiness firms. Graham tells us that publicity is the "dissemination of news and information through such channels as newspapers, magazines, television and radio, the use of which is not paid for by the publicity seekers (Graham 1969, 342)." Norby further suggests that publicity is concerned with "information placed in media

because of its newsworthiness (Norby 1974, p. 48)." He adds further that publicity can be a valuable tool because it tends to command a high degree of believability because it is viewed as a news item, not as advertising[21]. Also, Norby maintains that "publicity is a valuable marketing tool, particularly useful in the introduction of new ideas or products (Norby 1974, p. 48)."

Reporting on the results of farm trials or activities surrounding demonstrations belong in this category of promotion. The key for this type of reporting is that publicity must appear to be spontaneous as opposed to sponsored. This is because articles which seem to be sponsored may lose their "believability" and be regarded by producers as advertising.

4.4.6 Packaging

Pilditch (1973) calls the packaging of physical products or services a silent salesman. Graham describes what a package is and what it does in the following:

> A package is a container in which a product is packed, primarily for the purpose of protecting, shipping and displaying the merchandise. ... (it) presents a sales message to the purchaser (and) ... helps identify the product as seen at the point-of-purchase, such as the incorporation of a distributor's design that is easy to remember (Graham 1969, p. 290).

Norby (1974) tells us that packaging tends to be underrated as a promotional tool. He further suggests that besides containing and protecting the given product, packaging can attract potential purchasers' attention and can create interest in the package's contents.

4.4.7 Summary

The information which a firm supplies to producers in conjunction with its promotional efforts, either directly or indirectly, precipitates from the firm's "Marketing Mix" and "Promotional Mix" orientation. The manner in which a firm uses the five tools, whether independently or mixed, within the latter mix depends on the firm's sales environment and marketing strategy. A broad range of agribusiness firms associated with the Alberta pork production sector provide a spectrum of information to pork producers by means of promotional efforts (Figure 4.7). These efforts work toward the advantage of producers and firms.

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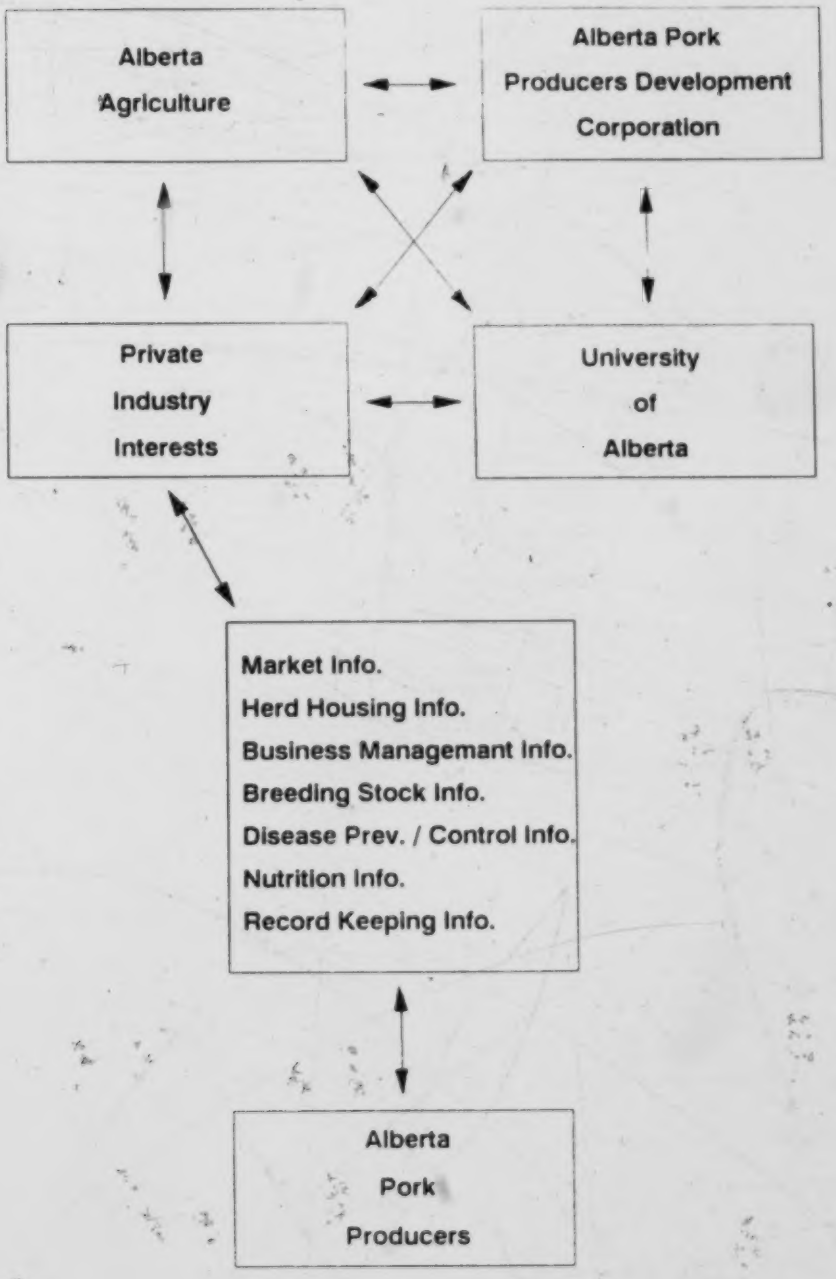
21 To clarify the difference between advertising and publicity, Graham's (1969) discussion on this topic will be examined. He tells us that the dissemination of a message through advertising must be paid for by the advertiser, whereas publicity is achieved by using space, time and other media facilities without charge to the person or organization desiring publicity. Further, Graham made comparisons by saying that advertising always attempts to sell goods, directly or indirectly, immediately or ultimately, whereas publicity may be used for non-commercial purposes as well as selling.

Figure 4.7

Info. from Private Industry Interests
to Alberta Pork Industry



4.5 The University of Alberta's Contribution To Pork Industry Extension

4.5.1 An Overview of the Faculty of Agriculture and Forestry's Activities

The Faculty of Agriculture and Forestry functions primarily as a teaching and research facility. This Faculty at the University of Alberta is comprised of several departments which may interface with the Alberta pork industry.

Swine research is conducted by the Department of Animal Science in an attempt to improve the efficiency and productivity of the pork industry, although there is only limited direct contact or information transfer to the producer level. The four primary extension mechanisms used by the department are visiting of producer meetings, participating in the Banff pork seminar, hosting the Swine Day, and developing of the Feeders' Day Report.

Industry and government interests have direct contact with the Faculty of Agriculture and Forestry. Industry provides funding for research. Also, government interests and this Faculty work together in assessing current trends, evaluating data, and identifying new research endeavors. Information generated at the University is transferred to producers through either the forementioned mechanisms or through government interests or industry channels.

Although there is only limited direct contact with pork producers[22], the Department of Animal Science does facilitate an extension program. The primary extension medium used is the Annual Feeders' Day Report which is distributed to over 12,000 producers, government departments, and industry interests. This publication has a section based on current revelations to the swine industry, combined with research information from various fields. A listing of the swine-related topics from the Feeders' Day Reports of the 1980s can be found in Appendix 3: Part 1.

The Department of Animal Science is the entity within the Faculty of Agriculture and Forestry which is most involved with extension work pertaining to Alberta's swine industry, as it has affiliation with swine production. The mandate of the department outlines the desired activities of its academic staff as that of teaching, research, extension, and scholarly activities. For example in the past, the Department has held Feeders' Days. These consisted of a cooperative

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22. This is compared to the levels of contact between producers and Alberta Agriculture, agribusiness suppliers or the APPDC.

effort between the swine, beef, dairy and poultry specializations. Currently, the department holds a Swine Day once every four years, in rotation with the other three specializations. Swine Day is a one day event -- at the last one there were over 1,000 producers, government representatives and industry interests in attendance. The agenda for the day is filled with displays, lectures, and demonstrations on the latest production techniques and developments in the swine industry.

The Department of Animal Science also sends academic staff to speak at producer meetings and conventions. The amount of time that a particular professor spends doing this type of activity is largely subject to the individual's discretion and interests; thus some participate in extension activities more than others. To exemplify this, one member of the Department of Animal Science attends up to twenty five producer meetings in a year. Also, there is considerable contact between the Department of Animal Science and federal and provincial government interests. The department also has interaction with the Alberta Pork Producers Development Corporation.

The Faculty of Agriculture and Forestry facilitates and provides speakers to the Annual Alberta Pork seminar in Banff. Its agenda is similar to that of Swine Day -- it includes seminars, workshops, panel discussions. A summary of the themes and representatives present at the past five (1988-1984) seminars is included in the Appendix 3: Part 2.

There are other departments within the Faculty of Agriculture and Forestry that have involvement with the swine industry. The Department of Rural Economy does pricing and efficiency studies, the Department of Food Science does projects on meat quality, and Agricultural Engineering assists in the design and ventilation of barn systems.

The University of Alberta has facilities for swine research and husbandry. In addition to on-campus laboratories, there is a recently opened Swine Research Center located at the University of Alberta farm. This facility is used for teaching and research, and is on display for producers and industry interests at the Swine Day. As well, tours of the University facility may be arranged by contacting the Faculty of Agriculture and Forestry.

Students attending the Faculty of Agriculture and Forestry have access to state-of-the-art equipment and resources which is used in their course and lab work. Those students who pursue post graduate education, in the form of Masters of Science or Doctor of Philosophy degrees, choose a specific topic and study it intensively. This stage of education entails specified course work and a written thesis or papers. The theses which have been prepared on swine industry topics

by students associated with the Faculty of Agriculture during the 1980s are presented in Appendix 3: Part 3. The theses and other publications are available for inspection by contacting the University of Alberta.

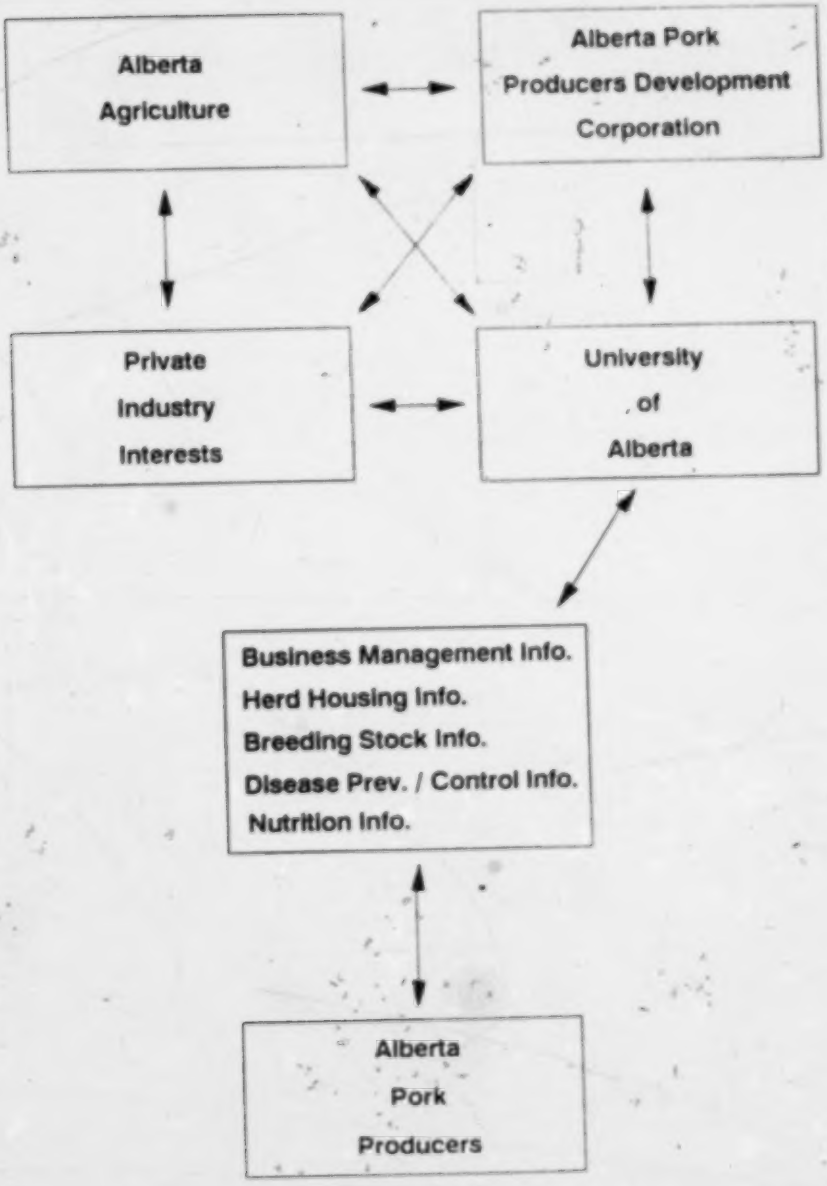
The Agriculture and Forestry Bulletin is published on a quarterly basis by the Faculty of Extension on matters relating to the Faculty of Agriculture and Forestry. A given issue may contain information pertaining to hog production. A list of the topics relating to the swine industry which have been presented in the Agriculture and Forestry Bulletins during the 1980s are outlined in Appendix 3: Part 4.

4.5.2 Summary

The Faculty of Agriculture and Forestry currently has the capacity to provide the Alberta pork producers with information. Within the various departments of the Faculty of Agriculture and Forestry research is conducted and documents are written on issues / topics applicable to the Alberta pork industry. From these activities, information may be generated for the Annual Feeders' Day Report, the Agriculture and Forestry Bulletin and the Annual Alberta Pork Seminar. In addition there are extension activities, provided by Faculty of Agriculture and Forestry staff members, which serve to inform Alberta pork producers (see Figure 4.8).

Figure 4.8

Information from U. of A. to
Alberta Pork Industry



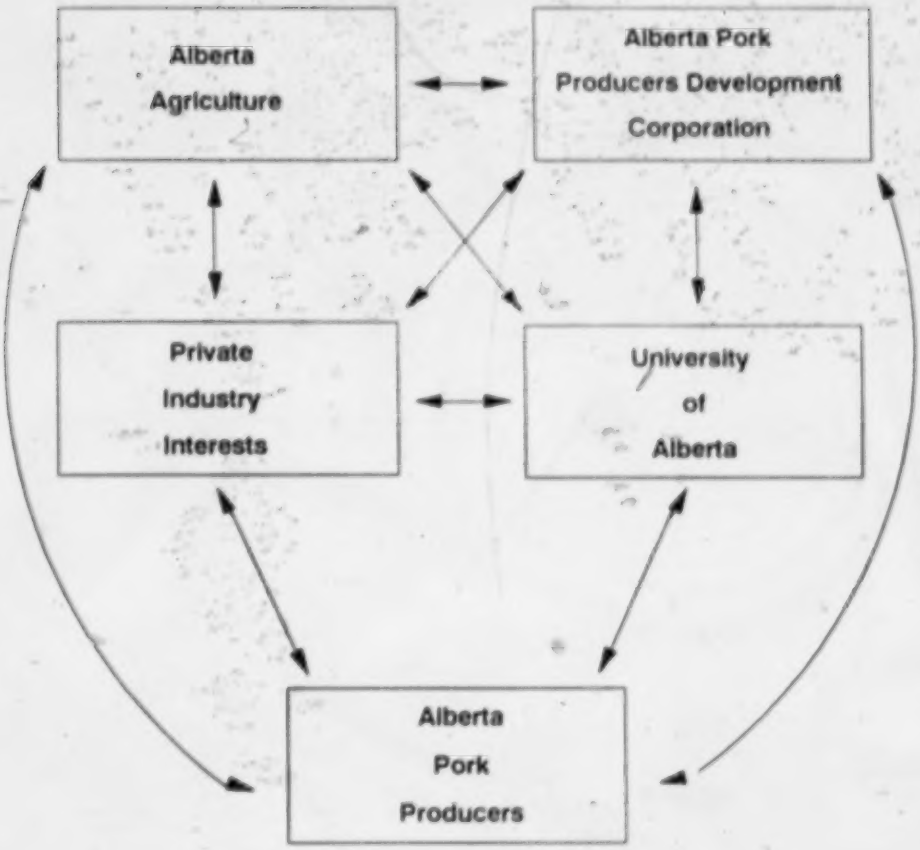
4.6 Summary for the Review of the Extension Services and Information Available to Alberta Pork Producers

This chapter has provided a review of the extension services and information available to Alberta pork producers. Four extension providing entities were the focus of this chapter. These were: 1) the Alberta Pork Producers Development Corporation; 2) Alberta Agriculture; 3) Agricultural Business firms and 4) the University of Alberta. These entities were discussed in the context of information and services they provided and the methods / media used to make these available to Alberta pork producers.

In summary, information is available to meet the information needs of Alberta pork producers. This information may be transmitted to Alberta pork producers directly, from the entity in which it was generated, or indirectly, through another entity that interfaces with Alberta pork producers. Figure 4.9 illustrates this observation.

Figure 4.9

ALBERTA PORK INDUSTRY
INTERACTION FLOW CHART



5 Analysis and Discussion of Results

5.1 Introduction

The analysis chapter will be comprised of several parts. These will be; 1) the demographic attributes of the respondents, 2) the information sources used to obtain general information, 3) the use of and satisfaction with information sources in Alberta and 4) the need for specific types of information required by Alberta pork producers. The discussion of the analysis for each of these areas will be preceded by a methodology section which will outline the manner in which the obtained data was separated, presented and analyzed. The related analysis discussion will follow. Each of these sections will present the merged data, obtained from the mail-out questionnaires and telephone interviews, in table form and will also contain descriptions thereof.

5.2 Demographic Attributes of the Respondents

5.2.1 Methodology

The results for this section were derived from sections A and 5 of the mailed questionnaire (Appendix 2) and telephone interview (Appendix 3), respectively. The demographic attributes of the Alberta pork producers were used as a stepping-stone in the data analysis. Table 5.1 is a summary of these demographic attributes of the respondents. The data from this Table are presented such that the feedback from the mailed questionnaires and the telephone interviews fill the first four columns, with the aggregate totals, of frequencies and percentages, being in the two remaining columns. The results consisted of two main categories. These being the attributes related to the producer, in sections A, B, C and F, and attributes related to the pork production unit itself, in sections D, E, G, H and I. Four of the demographic attributes presented in Table 5.1 (D, F, H, and I) were used in the crosstabulation procedures described in following sections.

5.2.2 Demographic Attributes of Respondents

The demographic sections of the mail-out questionnaire and telephone interview focussed on nine demographic characteristics relating to the respondents and their pork production operations. These were; A) education, B) age, C) gender, D) APPDC production district, E) type of production unit, F) years of experience, G) total farm sales, H) proportion of farm income derived from hog sales and I) number of hogs marketed in 1988. The summary of the data on this section can be seen in Table 5.1: Demographic Composition of Respondents.

Table 5.1 Demographic Composition of the Respondents

Demographic Summary	Mailed Questionnaire		Telephone Interview		Total	
A. Education attained by producer	fq	%	fq	%	fq	%
1. Less than high school	040	28.8	069	47.9	109	38.5
2. Completed high school	038	27.3	036	25.0	074	26.1
3. Some college/tech school	021	15.1	024	16.7	045	15.9
4. Completed college/tech	025	18.0	002	01.4	027	09.5
4. Some university	005	03.6	000	00.0	005	01.8
5. Completed university degree	010	07.2	012	08.3	022	07.8
6. Post graduate degree	000	00.0	001	00.7	001	00.4
Frequency totals	139		144		283	
B. Age of responding producer	fq	%[23]	fq	%	fq	%
1. Under 20 years	001	00.7	001	00.7	002	00.7
2. 20-24 years	001	00.7	005	03.4	006	02.1
3. 25-29 years	017	12.1	014	09.7	031	10.9
4. 30-44 years	065	46.4	057	39.3	122	42.8
5. 45-49 years	016	11.4	021	14.5	037	13.0
6. 50-54 years	009	06.4	018	12.4	027	09.5
7. 55-59 years	019	13.6	017	11.7	036	12.6
8. 60-64 years	008	05.7	009	06.2	017	05.9
9. 65 years and over	004	02.9	003	02.1	007	02.5
Frequency totals	140		145		285	
C. Sex of respondent	fq	%	fq	%	fq	%
1. Male	131	92.9	133	91.1	264	92.0
2. Female	010	07.1	013	08.9	023	08.0
Frequency totals	141		146		287	
D. APPDC production district	fq	%	fq	%	fq	%
1. District 1	015	10.8	000	00.0	015	05.2
2. District 2	022	15.8	016	10.9	038	13.3
3. District 3	008	05.8	005	03.4	013	04.6
4. District 4	032	23.0	005	03.4	037	12.9
5. District 5	010	07.2	001	00.7	011	03.8
6. District 6	013	09.4	014	09.5	027	09.4
7. District 7	008	05.8	012	08.2	020	07.0
8. District 8	014	10.1	044	29.9	058	20.3
9. District 9	004	02.9	000	00.0	004	01.4
10. No response	013	09.4	050	34.0	063	22.0
Frequency totals	139		147		286	
E. Type of production unit	fq	%	fq	%	fq	%
1. Farrow to finish unit	097	69.8	087	59.6	184	64.6
2. Farrow to weaner unit	000	00.0	010	06.8	010	03.5
3. Pure bred breeding stock unit	000	00.0	001	00.7	001	00.4
4. Weaner to finish unit	017	12.2	021	14.4	038	13.3
5. Light feeder to finish unit	020	14.4	---[24]	---	020	07.0
6. Feeder to finish unit	005	03.6	027	18.5	032	11.2
Frequency totals	139		146		285	

23 The columns of percentage figures in Table 5.1 may not sum to 100.00 due to rounding.

24 "---" denotes that this variable was not included in the given instrument.

Demographic Summary (continued)	Mailed Questionnaire		Telephone Interview		Total	
F. Number of years of experience	fq	%	fq	%	fq	%
1. 1-5 years	013	09.3	013	08.9	026	09.1
2. 6-10 years	025	17.9	034	23.3	059	20.6
3. 11-15 years	031	22.1	020	13.7	051	17.8
4. 16-20 years	016	11.4	022	15.1	038	13.3
5. 21-25 years	015	10.7	015	10.3	030	10.5
6. 26-30 years	008	05.7	024	16.4	032	11.2
7. 31-35 years	014	10.0	005	03.4	019	06.6
8. 36-40 years	008	05.7	007	04.8	015	05.2
9. 41 or more years	010	07.1	006	04.1	016	05.6
Frequence totals	140		146		286	
G. Estimated annual total farm sales	fq	%	fq	%	fq	%
1. Less than $2,500	001	00.7	001	00.8	002	00.8
2. $2,500-24,999	003	02.2	001	00.8	004	01.5
3. $25,000-49,999	004	03.0	003	02.3	007	02.6
4. Less than $50,000	---	---	015	11.5	015	05.7
5. $50,000-74,999	008	05.9	002	01.5	010	03.8
6. $50,000-99,999	---	---	009	06.9	009	03.4
7. $75,000-99,999	007	05.2	003	02.3	010	03.8
8. $100,000-149,999	024	17.8	022	16.9	046	17.4
9. $150,000-199,999	020	14.8	016	12.3	036	13.6
10. Over $200,000	---	---	034	26.2	034	12.8
11. $200,000-249,000	014	10.4	006	04.5	020	07.5
12. Over $250,000	054	40.0	018	13.8	072	27.2
Frequency totals	135		130		265	
H. Proportion of total from hog sales	fq	%	fq	%	fq	%
1. Less than 10%	005	03.6	014	09.7	019	06.7
2. 10-19%	007	05.0	008	05.6	015	05.3
3. 20-25%	006	04.3	008	05.6	014	04.9
4. 26-50%	015	10.8	031	21.5	046	16.3
5. 51-75%	027	19.4	034	23.6	061	21.6
6. 76-90%	046	33.1	019	13.2	065	23.0
7. 91-100%	033	23.7	030	20.8	063	22.3
Frequency totals	139		144		283	
I. Hogs (total) marketed in 1988	fq	%	fq	%	fq	%
1. 1-49 head	006	04.3	008	05.6	014	05.0
2. 50-99 head	002	01.4	006	04.2	008	02.8
3. 100-199 head	003	02.2	006	04.2	009	03.2
4. 200-499 head	008	05.8	019	13.2	027	09.6
5. 500-999 head	022	15.9	022	15.3	044	15.6
6. 1,000-1,499 head	021	15.2	024	16.7	045	16.0
7. 1,500-2,499 head	044	31.9	039	27.1	083	29.4
8. 2,500-4,999 head	024	17.4	014	09.7	038	13.5
9. Over 5,000 head	008	05.8	006	04.2	014	05.0
Frequency totals	138		144		282	

There were 283 respondents who answered the question regarding the level of education which they had obtained. Of those who responded, 38.5 % indicated that they had acquired less

than a high school education. Approximately two-thirds (64.6%) indicated that they had obtained a high school education or less. In addition, about one-fourth (24.5%) indicated that they had some or completed a college or technical school program.

The majority (88.8 %) of the respondents indicated that they were in the age range of between 25 years and 59 years. Also, the majority of the respondents (92.0 %) indicated that they were males.

There were 286 producers who responded to the question asking which APPDC Producer District that they were in. Of these respondents, the largest proportion (22.0%) did not know or indicate which district that they were in. This figure primarily arose from the telephone interview results, where the (then current) directors were not listed. In this instrument there were 34.0% of the respondents who did not indicate their APPDC Producer District.

There were approximately one-fifth of the respondents each from Districts 1 and 2 (18.5%), 3 and 4 (17.5%) and District 8 (20.3%). Respondents from Districts 7 and 9 comprised 8.4% of the total. The nine APPDC Producer Districts were collapsed in the above manner for the purpose of crosstabulating data in following analysis sections. The districts were grouped using geographic proximity, as opposed to evenly sized respondent groups, as the collapsing criteria.

Of the 285 producers who responded to the question on which type of pork production unit that they were involved with, almost two-thirds (64.6%) indicated that they had farrow to finish units. 13.2% of the respondents indicated a weaner to finish unit, with a similar number (11.2%) indicating an involvement with a feeder-to-finish operation.

There were 286 producers who responded to the question about their experience in the pork industry. Similar numbers of these respondents indicated 10 years or less of experience (29.7%) and greater than 26 years of experience (28.6%) in the pork industry. The remaining respondents (41.6%) had between 11 and 25 years of experience in the pork industry. The nine experience levels were collapsed in the above manner for the purpose of crosstabulating data in following sections.

Approximately one-fifth of the 282 respondents to the question on the number of hogs marketed in 1988 each indicated 499 head or less marketed (20.6%) and over 2500 head marketed (18.5%). 31.6% of these respondents marketed between 500 and 1499 head and 29.4% said that

they marketed between 1500 and 2499 head of hogs in 1988. This demographic attribute section was collapsed in the above manner in order to keep the size of the groups as similar as possible. These groups were used in the crosstabulating of data in following sections.

There were 265 producers who revealed an estimate on their total annual farm sales. Of these respondents, approximately one-fifth (21.6%) had farm income of $99,999 or less in 1988. 31.0% had farm sales in the range of $100,000 to $199,999 and 47.5% had farm sales of over $200,000. At least 57.3% (27.2% of total) of this latter figure was comprised of producers estimating an annual farm income of greater than $250,000 in 1988.

Of the 283 respondents who indicated the degree to which hog sales contributed to their farms' sales in 1988, approximately one-sixth of respondents each indicated a proportion of 25.0% or less (16.9%) and 25-50% (16.3%). 21.6% of these respondents said 51-75% of their farms' income was derived from hog sales. The remaining 41.7% of respondents indicated a proportion of 76% or greater. The results arising from this question were collapsed in the above manner for the purpose of crosstabulating data in following sections.

The Hutterite hog managers interviewed all had acquired less than high school educations, ranged in age from 29 to 55 years and had at least 7 years of experience in the pork industry. All associated operations were farrow to finish units which contributed between 20 and 30% to the respective Colonies' incomes. The number of hogs marketed in 1988 by these hog managers was at least 2500 head.

5.3 Information Sources Used by Alberta Pork Producers for General Information Needs

5.3.1 Methodology

The results for this section were derived from sections B.2 and 2 of the mailed questionnaire (Appendix 1) and telephone interview (Appendix 2), respectively. Section B.2 in the mailed

questionnaire consists of eleven categories as opposed to the telephone interview (Section 2) which contains eight categories. The two data sets were merged using the format of the latter as a template.

Each of the eight information source categories relating to a general information need was crosstabulated with four of the demographic attributes presented in Table 5.1. These were the APPDC Producer District to which the respondent belonged (section D), number of years of experience that the respondent had in the swine industry (section F), proportion of total farm sales derived from hog sales (section H) and total number of hogs marketed by the respondent in 1988 (section I). In order for a respondent's feedback to be included in a crosstabulation table, that producer had to have provided an answer for the given demographic variable as well as for the information source variable. There were 32 tables derived from this crosstabulation procedure (see Tables 5.2-5.33).

Collapsing of the categories within the demographic attributes (as indicated in section 5.2.2) in the resulting tables was necessary in order to minimize/reduce the number of empty cells inthese tables. The collapsing procedure was based on observations of the frequencies presented in Table 5.1. An attempt was made to keep the number of observations in the collapsed categories as similar as possible, given the lumpiness of the frequencies.

The results were presented by listing the sources of information used to satisfy a general information need, as indicated by the respondents, the respective totals and demographic category results listed as percentages in rows. The column totals were listed as percentages and frequencies. Sources of information which were indicated by less than one percent of the total respondents were not included in the tables in order to facilitate analysis by minimizing the number of empty cells in the columns to the right of the "Total" column.

The Spearman Rank Order Correlation Coefficient (SROCC) statistic was used to analyze the 32 crosstabulation tables for differences in rank ordering of the information sources within their columns. The decision to use this summary statistic was based on the nature of the results

arising from this study[25]. The procedure for deriving this summary statistic makes use of a prescribed ranking strategy, assessment of the respective rankings in the columns being compared, and a calculation based on the following formula:

$$SROCC = P = 1 - \frac{6(\Sigma d^2)}{N(N^2 - 1)}$$

where N = the number of observations present in the column and d = the differences in the ranking of the information sources between the columns being compared.

The range in the value of the SROCC is + 1 to − 1. The determination of the latter figure would indicate that the ranks in the columns being compared are exactly opposite to each other. A SROCC of + 1 would indicate that the two columns are ranked identically. Statistics within this range must be evaluated subjectively with respect to the degree of correlation existing between the two columns being compared.

5.3.2 Description of Results

5.3.2.1 Market Information Sources by APPDC Producer District

Table 5.2 indicates the percentage distribution of responses with respect to the source of information used for market information controlled by APPDC Producer District. Nine information sources were indicated by the 242 respondents at an aggregate level of greater than one percent.

Radio was the most frequent (37.2%) source of marketing information used by all of the groups when considered in aggregate, followed by Codephone (30.6%) and APPDC (16.9%).

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25 Initially, a Chi-Square Test was thought to be an ideal test for analyzing these tables, as this commonly used non-parametric test is readily accepted by academics. The reason that a Chi-Square Test could not be used in this research, is because many of the tables contain (a) column(s) which have empty cells, 0.0 entries, which are not acceptable in the Chi-Square testing procedure. It would have been necessary to further collapse the columns, as well as the rows, in order to surmount this problem. The sacrifice for using the Chi-Square test would have been "over-generalized" tables and analysis inconsistencies arising from collapsing, due to the differences in the tables.

APPDC sources of information accounted for 47.5% of the aggregated total. Radio sources (including CFCW) comprised 40.5% of this total. These two sources combine to almost 90% of the market information sources indicated.

In the columns of Table 5.2, several results were markedly different than the rest found in the respective information source rows. 26.6% (high) of the respondents from District 8 indicated using the APPDC as the information source for market information, whereas 20.3% (low) indicated the Codephone. Of the respondents from Districts 7 and 9, 29.6% (low) indicated the use of Radio and 14.0% (high) of the respondents from Districts 3 and 4 used Television.

All of the SROCCs comparing these five groups were positive and these figures ranged from a moderate correlation of .4915 (between Districts 3-4 and 7-9) to a strong correlation of .8253 (between Districts 5-6 and 7-9). The remaining eight figures were evenly distributed within this range.

Table 5.2
Market Information Sources by APPDC Producer District:
Percentage Distribution of Responses

		Districts				
Information Source	Total	1 & 2	3 & 4	5 & 6	7 & 9	8
APPDC	16.9	17.0	14.0	12.2	7.4	26.6
CFCW (Radio Station)	3.3	0.0	3.5	7.3	7.4	1.6
Codephone	30.6	39.6	22.8	36.6	44.4	20.3
District Agriculturalist	1.2	0.0	0.0	0.0	3.7	3.1
Grassroots	1.7	1.9	0.0	2.4	3.7	1.6
Newspapers/Magazines	4.1	3.8	7.0	2.4	0.0	4.7
Radio	37.2	35.9	36.8	39.0	29.6	40.6
Radio/Magazine	1.2	0.0	1.8	0.0	3.7	1.6
Television	3.7	1.9	14.0	0.0	0.0	0.0
Total Percent	99.9	100.1	99.9	99.9	99.9	100.1
Total Number	(242)	(53)	(57)	(41)	(27)	(64)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .816$; $R_{S_{1,3}} = .770$; $R_{S_{1,4}} = .494$; $R_{S_{1,5}} = .727$; $R_{S_{2,3}} = .700$; $R_{S_{2,4}} = .492$; $R_{S_{2,5}} = .573$; $R_{S_{3,4}} = .825$; $R_{S_{3,5}} = .771$ and $R_{S_{4,5}} = .626$.

5.3.2.2 Market Information Sources by Years of Experience in Pork Industry

Table 5.3 indicates the percentage distribution of responses with respect to the sources of market information and the number of years experience in the pork industry. Ten information sources were indicated by the 252 respondents at an aggregate level of greater than one percent.

Radio was the market information source which was indicated most often (30.6%) by the aggregate, followed by Codephone (18.3%), Newspapers/Magazines (17.1%) and APPDC (11.1%).

Radio sources (including CFCW) of information accounted for 38.9% of the aggregated total and APPDC sources comprised 29.4% of this total. These two primary sources account for almost 70% of the aggregated responses.

In the columns of Table 5.3, several results were noticably different than the rest found in their respective information source rows. 3.6% (low) of the respondents with 11 - 25 years of experience used CFCW (radio station) and the Codephone was used by 14.4% (low) of this group. In addition, 9.5% (low) of the producers with 10 years or less of experience used Newspapers / Magazines.

All of the SROCCs comparing these three groups were positive. These figures were tightly grouped, ranging from .8483 (between 10 years or less and 11-25 years experience) to .9047 (between 11-25 years and 26 or greater years experience). These summary statistics indicate that there is a strong correlation in the ordering between the three experience groups.

Table 5.3
Market Information Sources by Years of Experience in Pork Industry:
Percentage Distribution of Responses

Information Source	Total	Years of Experience in Pork Industry		
		10 or Less	11-25	26 +
APPDC	11.1	12.2	10.8	10.4
CFCW (Radio Station)	8.3	9.5	3.6	14.9
Codephone	18.3	23.0	14.4	19.4
District Agriculturalist	1.6	1.3	1.8	1.5
Futures Market	3.2	2.7	3.6	3.0
Grassroots	2.0	2.7	2.7	0.0
Newspapers/Magazines	17.1	9.5	21.6	17.9
Radio	30.6	33.8	31.5	25.4
Television	2.8	1.3	3.6	3.0
Western Hog Journal	5.2	4.1	6.3	4.5
Total Percent	100.2	100.1	99.9	100.0
Total Number	(252)	(74)	(111)	(67)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{s_{1,2}}$ = .848; $R_{s_{1,3}}$ = .896 and $R_{s_{2,3}}$ = .905.

5.3.2.3 Market Information Sources by Number of Hogs Marketed in 1988

Table 5.4 indicates the percentage distribution of responses with respect to the source of information used for herd housing controlled for the number of hogs marketed in 1988. Seven sources of market information were listed by 291 respondents at an aggregate level of greater than one percent.

Radio was the most frequent (37.5%) source of market information used by the respondents, followed by the Codephone (29.6%) and the APPDC (15.5%).

Radio sources of information, including CFCW, accounted for 44.7% of the aggregated total. APPDC sources, including Codephone, also accounted for a large proportion (45.1%) of market information procured by the respondents. These two primary sources comprise 89.8% of the market information sources indicated by these respondents.

In the columns of Table 5.4, several results were markedly different than the rest found in their respective information source rows. APPDC was indicated by 7.3% (low) of the respondents

producing 1 - 499 hogs in 1988. Of this group, 16.4% (high) indicated they used CFCW (radio station) for market information. Of the respondents in the 2500+ group, 43.1% (high) used the Codephone and 10.3% (high) used Newspapers / Magazines.

The SROCCs comparing the four production level groups in Table 5.4 were all positive. These six figures ranged from .7388 (between 1 - 499 and 1,500 - 2,499) to .9727 (between 1,500 - 2,499 and greater than 2,500). The remaining four figures were all greater than .8000, suggesting a strong similarity in the rankings of the seven information sources within the four production level groups.

Table 5.4
Market Information Sources by Number of Hogs Marketed in 1988:
Percentage Distribution of Responses

		Number of Hogs Marketed in 1988			
Information Source	Total	1-499	500-1499	1500-2499	2500 +
APPDC	15.5	7.3	18.9	19.3	12.1
CFCW (Radio Station)	7.2	16.4	7.4	3.6	3.5
Codephone	29.6	21.8	22.1	33.7	43.1
District Agriculturalist	1.4	0.0	2.1	2.4	0.0
Newspapers/Magazines	5.5	5.5	3.2	4.8	10.3
Radio	37.5	45.5	44.2	31.3	27.6
Television	3.4	3.6	2.1	4.8	3.5
Total Percent	100.1	100.1	100.0	99.9	100.1
Total Number	(291)	(55)	(95)	(83)	(58)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}}$ = .955; $R_{S_{1,3}}$ = .739; $R_{S_{1,4}}$ = .811; $R_{S_{2,3}}$ = .809; $R_{S_{2,4}}$ = .882 and $R_{S_{3,4}}$ = .972.

5.3.2.4 Market Information Sources by Proportion of Gross Farm Sales from Hogs in 1988

Table 5.5 indicates the percentage distribution of responses with respect to the source of information used for market information controlled by the proportion of gross farm sales derived from hogs in 1988. Seven sources of market information were listed by the 292 respondents at a level of one percent or greater.

Viewed from an aggregate perspective, Radio comprised the most frequently listed market information source (37.3%), followed by the Codephone (29.5%) and the APPDC (15.8%).

Radio sources, including CFCW, totalled 45.3% of the market information sources listed. Ranking a close second was information sources arising from the APPDC infrastructure (44.5%).

In the columns of Table 5.5, several results were noticably different than the rest found in their respective information source rows. 4.7% (low) of the producers indicating a 25% or less proportion used the APPDC. Conversly, 31.3% (high) of the producers from the 26 - 50% proportion group used this source. CFCW (radio station) was used by 23.3% (high) of the 25% or less proportion group. In addition, 34.9% (high) of the 76%+ porportion respondents used the Codephone.

All of the SROCCs comparing the four groups in table 5.5 were positive. These six figures ranged from a moderate correlation of .5045 (between 25% or less and 76% of greater) to a strong correlation of .9550 (between the ranges 26-50% and 51-75%). The remaining four correlation coefficients were above .7500.

Table 5.5
Market Information Sources by Proportion of Gross Farm Sales from Hogs in 1988: Percentage Distribution of Responses

		Proportion of Gross Farm Sales from Hogs in 1988			
Information Source	Total	25 or Less	26-50	51-75	76-100
APPDC	15.8	4.7	31.3	12.0	15.9
CFCW (Radio Station)	7.2	23.3	6.3	9.3	0.8
Codephone	29.5	27.9	20.8	26.7	34.9
District Agriculturalist	1.4	0.0	0.0	2.7	1.6
Newspapers/Magazines	5.5	7.0	6.3	6.7	4.0
Radio	37.3	37.2	33.3	38.7	38.1
Television	3.4	0.0	2.1	4.0	4.8
Total Percent	100.1	100.1	100.1	100.1	100.1
Total Number	(292)	(43)	(48)	(75)	(126)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .764$; $R_{S_{1,3}} = .883$; $R_{S_{1,4}} = .505$; $R_{S_{2,3}} = .955$; $R_{S_{2,4}} = .757$ and $R_{S_{3,4}} = .750$.

5.3.2.5 Herd Housing Information Sources by APPDC Producer District

Table 5.6 indicates the percentage distribution of responses with respect to the source of information used for herd housing controlled for the APPDC producer districts. Sixteen information sources were indicated by respondents (226) at an aggregate level of greater than one percent.

District Agriculturalists were the most frequent source of information used by all groups when considered in aggregate (20.8%) followed by Other Producers (11.5%), Alberta Agriculture (11.1%), Western Hog Journal (9.3%), Agribusiness Supplier (7.5%) and Newspapers/Magazines (7.5%).

Information Sources arising from the Alberta Agriculture infrastructure account for 43.0% of the aggregated total. This figure is comprised of District Agriculturalists 20.8%, Alberta Agriculture 11.1%, Swine Specialists 5.8%, Agricultural Engineers 4.0% and the Pork Production Handbook 1.3%.

In the columns of Table 5.6, several results were noticably different than the rest found in their respective information source rows. 7.0% (high) of the respondents in Districts 3 and 4 used Agricultural Engineers and 8.8% (high) used the Pork Congress for acquiring herd housing information. Seminars were used by 5.9% (high) of the respondents in Districts 1 and 2 and 15.8% (high) of the respondents from Districts 3 and 4 used the Western Hog Journal.

All of the SROCCs which compared the rank orderings for the groups in Table 5.6 were positive. The correlation coefficients ranged from a low of .4108 (between Districts 3-4 and District 8) to a high of .7467 (between Districts 5-6 and Districts 7 and 9). The eight remaining combinations had figures which were evenly distributed within this range.

Table 5.6
Herd Housing Information Sources by APPDC Producer District:
Percentage Distribution of Responses

Information Source	Total	Districts 1 & 2	3 & 4	5 & 6	7 & 9	8
Agribusiness Suppliers	7.5	5.9	1.8	12.1	12.0	10.0
Agricultural Engineers	4.0	2.0	7.0	3.0	4.0	3.3
Alberta Agriculture	11.1	19.6	12.3	6.1	8.0	6.7
District Agriculturalist	20.8	11.8	12.3	33.3	32.0	25.0
Hog Magazines	3.1	2.0	1.8	0.0	0.0	8.3
Journals	2.7	2.0	5.3	0.0	8.0	0.0
Newspapers/Magazines	7.5	7.8	8.8	12.1	4.0	5.0
Other Producers	11.5	9.8	7.0	15.2	12.0	15.0
Own Experience	3.5	9.8	1.8	3.0	0.0	1.7
Pork Congress	4.0	2.0	8.8	3.0	4.0	1.7
Pork Production Handbook	1.3	2.0	1.8	0.0	0.0	1.7
Publications	1.8	2.0	1.8	0.0	0.0	3.3
Seminars	1.8	5.9	0.0	0.0	4.0	0.0
Swine Specialist	5.8	5.9	7.0	6.1	4.0	5.0
Veterinarian	4.4	3.9	7.0	0.0	0.0	6.7
Western Hog Journal	9.3	7.8	15.8	6.1	8.0	6.7
Total Percent	100.1	100.2	100.2	100.0	100.0	100.1
Total Number	(226)	(51)	(57)	(33)	(25)	(60)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}}$ = .448; $R_{S_{1,3}}$ = .734; $R_{S_{1,4}}$ = .525; $R_{S_{1,5}}$ = .483; $R_{S_{1,6}}$ = .600; $R_{S_{1,7}}$ = .493;

$R_{S_{1,8}}$ = .411; $R_{S_{2,3}}$ = .747; $R_{S_{2,4}}$ = .649 and $R_{S_{3,4}}$ = .460.

5.3.2.6 Herd Housing Information Sources by Years of Experience in the Pork Industry

Table 5.7 indicates the percentage distribution of responses with respect to the source of information used for herd housing controlled by years of experience in the pork industry. Seventeen information sources were listed by respondents (279) at a level of one percent as greater in aggregate.

District Agriculturalists were the most frequent (21.9%) source of herd housing information used by all groups when considered in aggregate. Also at the aggregate level, Alberta Agriculture ranked second (11.8%), Other Producers ranked third (11.1%) and Newspapers/Magazines ranked fourth (9.0%).

Information sources arising from the Alberta Agriculture infrastructure accounts for 45.3% of the aggregated total. This figure is comprised of District Agriculturalist (21.9%), Alberta Agriculture (11.8%), Swine Specialists (6.5%), Pork Production Handbook (2.9%) and Agricultural Engineering (2.2%).

In the columns of Table 5.7, several results were markedly different than those found in their respective information source rows. Alberta Agriculture was used by 15.1% (high) of the respondents with 10 years or less of experience. In addition, the Pork Production Handbook was used by 7.0% (high) of the respondents in this group. Newspaper / Magazine were used by 15.8% (high) of the producers with 26+ years of experience. 15.4% (high) of the respondents with 11 - 25 years of experience used Other Producers and 6.0% (high) used the Pork Congress for herd housing information.

All of the SROCCs which compared the rank orderings for all of the groups in Table 5.7 were positive. All of the correlation coefficients were moderately high, ranging from .6700 (between 10 years or less and greater than 25 years experience) to .7089 (between 11-25 years and greater than 25 years of experience).

Table 5.7
Herd Housing Information Sources by Years of Experience in Pork Industry:
Percentage Distribution of Responses

Information Source	Total	Years of Experience in Pork Industry		
		10 or Less	11-25	26 +
Agribusiness Suppliers	5.7	4.7	6.0	6.6
Agricultural Engineering	2.2	3.5	.9	2.6
Alberta Agriculture	11.8	15.1	11.1	9.2
Country Guide	1.1	0.0	1.7	1.3
District Agriculturalist	21.9	23.3	20.5	22.4
Hog Magazine	3.9	3.5	3.4	5.3
Journals	2.2	1.2	2.6	2.6
Newspapers/Magazines	9.0	7.0	6.0	15.8
Other Producers	11.1	8.1	15.4	7.9
Own Experience	3.6	1.2	4.3	5.3
Pork Congress	3.2	1.2	6.0	1.3
Pork Production Handbook	2.9	7.0	1.7	0.0
Seminars	1.1	0.0	1.7	1.3
Swine Specialist	6.5	8.1	5.1	6.6
Univ. of Alberta Short Course	1.4	2.3	0.0	2.6
Veterinarian	3.9	5.8	5.1	0.0
Western Hog Journal	8.6	8.1	8.5	9.2
Total Percent	100.1	100.1	100.0	100.0
Total Number	(279)	(86)	(117)	(76)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .699$; $R_{S_{1,3}} = .670$ and $R_{S_{2,3}} = .709$.

5.3.2.7 Herd Housing Information Sources by Number of Hogs Marketed in 1988

Table 5.8 indicates the percentage distribution of responses with respect to the source of information used for herd housing controlled for the number of hogs marketed in 1988. Seventeen sources were listed by the respondents (278) at a level of greater than one percent.

District Agriculturalists were the most frequent source of information used by all groups when considered in aggregate (21.6%). Next were Alberta Agriculture and Other Producers which were the indicated sources of 10.8% of the aggregate.

Information sources arising from the Alberta Agriculture infrastructure accounted for 45.7% of the aggregate total. This figure is comprised of District Agriculturalists 21.6%, Alberta Agriculture 10.6%, Swine Specialists 6.8%, Agricultural Engineers 3.6% and Pork Production Handbook 2.9%.

In the columns of Table 5.8, several results were noticably different than those found in their respective information source rows. Agribusiness Suppliers were used by 9.4% (high) of the respondents marketing 500 - 1499 hogs. 2.2% (low) of the producers in the 1 - 499 category used Alberta Agriculture, 34.8% (high) used District Agriculturalists and 10.9% (high) of this group used a Hog Magazine. Newspapers / Magazines were used by 10.2% (high) of the producers marketing 1500 - 2499 hogs. In addition, 5.1% (high) of the 2500+ catogory respondents used Seminars to acquire herd housing information.

The percentage of producers who indicated District Agriculturalist as their source of herd housing information declined gradually from 34.8% to 15.3% as the number of hogs marketed in 1988 increased. Conversely, the percentage of producers who used veterinarians increased from 0.0% to 8.5% as the number of hogs produced in 1988 increased.

The rankings of the sources within the four production level categories were compared by Spearman Rank Order Correlation Coefficients (S.R.O.C.C.). All of the SROCCs were positive, ranging from .2952 (between 1 - 499 and 2,500 +) and .8993 (between 500 - 1,499 and 1,500 - 2,499). There was a cluster of the remaining four combinations around .57 ± .05, indicating a moderate correlation in the orderings within these groups.

Table 5.8
Herd Housing Information Sources by Number of Hogs Marketed in 1988:
Percentage Distribution of Responses

Information Source	Total	Number of Hogs Marketed in 1988			
		1-499	500-1499	1500-2499	2500 +
Agribusiness Suppliers	6.8	4.3	9.4	5.7	6.8
Agricultural Engineers	3.6	4.3	3.5	4.5	1.7
Alberta Agriculture	10.8	2.2	15.3	12.5	8.5
Country Guide	1.1	2.2	1.2	1.1	0.0
District Agriculturalist	21.6	34.8	21.2	19.3	15.3
Hog Magazine	4.0	10.9	2.4	2.3	3.4
Journals	2.2	0.0	1.2	3.4	3.4
Newspapers/Magazines	7.6	6.5	8.2	10.2	3.4
Other Producers	10.8	13.0	5.9	10.2	16.9
Own Experience	3.6	4.3	3.5	3.4	3.4
Pork Congress	3.2	0.0	3.5	3.4	5.1
Pork Production Handbook	2.9	4.3	2.4	2.3	3.4
Publications	1.4	0.0	2.4	2.3	0.0
Seminars	1.1	0.0	0.0	0.0	5.1
Swine Specialist	6.8	4.3	8.2	4.5	10.2
Veterinarian	4.0	0.0	2.4	4.5	8.5
Western Hog Journal	8.6	8.7	9.4	10.2	5.1
Total Percent	100.1	99.8	100.1	99.8	100.2
Total Number	(278)	(46)	(85)	(88)	(59)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .589$; $R_{S_{1,3}} = .528$; $R_{S_{1,4}} = .295$; $R_{S_{2,3}} = .899$; $R_{S_{2,4}} = .573$ and $R_{S_{3,4}} = .637$.

5.3.2.8 Herd Housing Information Sources by Proportion of Gross Farm Sales from Hogs in 1988

Table 5.9 indicates the percentage distribution of responses with respect to the source of information used for herd housing controlled by the proportion of gross farm sales from hogs in 1988. Seventeen information sources were indicated by the 290 respondents at an aggregate level of greater than one percent.

District Agriculturalists were the most frequent source of information (21.0%) used by all groups when considered in aggregate, followed by Alberta Agriculture (17.4%), Other Producers (10.7%), with Newspapers/Magazines and Western Hog Journal each attaining an indication level of 8.6%.

Information sources arising from the Alberta Agriculture information account for 45.5% of the aggregate total. This figure is comprised of District Agriculturalists (21.0%), Alberta Agriculture (12.4%), Swine Specialist (6.2%), Agriculture Engineers (3.1%) and the Pork Production Handbook (2.8%).

In the columns of Table 5.9, several results were markedly different than those found in their respective information source rows. Agricultural Engineers were used by 7.7% (high) of respondents indicating the 25% or less proportion. In addition, 5.1% (high) and 10.3% (high) of this group used the Country Guide and Hog Magazines, respectively. District Agriculturalists were used by 16.7% (low) of the producers in the 76%+ proportion group and Newspaper /Magazines were used by 12.3% (high) of the producers indicating the 51 - 75% range. In addition, 15.4% (high) of the respondents in the 26 - 50 % range used Other Producers for herd housing information.

All of the SROCCs comparing the four groups of proportions, of hog sales compared to the gross farm sales, were positive. These figures ranged from a moderate correlation coefficient of .5860 (between 25% or less and 76% or greater) to a strong correlation of .8268 (between 26-50% and 51-75%). The remaining SROCCs tended to be clustered around .65.

Table 5.9
Herd Housing Information Sources by Proportion of Gross Farm Sales from Hogs in 1988: Percentage Distribution of Responses

		Proportion of Gross Farm Sales from Hogs in 1988			
Information Source	Total	25 or Less	26-50	51-75	76-100
Agribusiness Suppliers	6.6	5.1	5.8	6.8	7.1
Agricultural Engineers	3.1	7.7	0.0	1.4	4.0
Alberta Agriculture	12.4	10.3	9.6	12.3	14.3
Country Guide	1.7	5.1	1.9	1.4	.8
District Agriculturalist	21.0	20.5	28.8	23.3	16.7
Hog Magazine	3.8	10.3	5.8	4.1	.8
Journals	2.1	0.0	1.9	2.7	2.4
Newspapers/Magazines	8.6	5.1	7.7	12.3	7.9
Other Producers	10.7	7.7	15.4	9.6	10.3
Own Experience	3.4	5.1	3.8	2.7	3.2
Pork Congress	3.1	0.0	1.9	5.5	3.2
Pork Production Handbook	2.8	2.6	0.0	2.7	4.0
Seminars	1.0	0.0	1.9	0.0	1.6
Swine Specialist	6.2	7.7	5.8	4.1	7.1
Univ. of Alberta Short Course	1.0	0.0	0.0	0.0	2.4
Veterinarian	3.8	2.6	5.8	2.7	4.0
Western Hog Journal	8.6	10.3	3.8	8.2	10.3
Total Percent	99.9	100.1	99.9	99.8	100.1
Total Number	(290)	(39)	(52)	(73)	(126)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .627$; $R_{S_{1,3}} = .623$; $R_{S_{1,4}} = .586$; $R_{S_{2,3}} = .827$; $R_{S_{2,4}} = .651$ and $R_{S_{3,4}} = .802$.

5.3.2.9 Business Management Information Sources by APPDC Producer District

Table 5.10 indicates the percentage distribution of responses with respect to the source of information used for business management controlled by APPDC production district. Eleven information sources were listed by the 164 respondents at a level of one percent or greater.

The District Agriculturalist was the most referred to source of information when this group is considered on an aggregate basis. In total, information sources arising from the Alberta Agriculture infrastructure accounted for over one-third (36.0%) of those indicated by this group (District Agriculturalist 22.6%, Alberta Agriculturalist 7.9%, and Swine Specialist 5.5%). Business management information sources arising from the private sector combined to over one-fifth (Accountant 12% and Bank 9.1%) of those indicated by the aggregate group.

In the columns of Table 5.10, several results were found to be noticably different than the others in their respective information source rows. Of the respondents indicating Districts 7 and 9, 0.0% (low) used Accountants and Own Experience, whereas 42.9% (high) and 9.5% (high) used Newspapers / Magazines and Swine Specialist, respectively. Of the respondents from District 8, 0.0% (low) used the Western Hog Journal.

Of the ten SROCCs, comparing the five groups of producers, seven were positive and three were negative in sign. When the rank ordering of Districts 7 and 9 were compared to Districts 1 and 2 (-.4295), Districts 3 and 4 (-.2460) and District 9 (-.1402) the outcomes were negative. In all of these three cases, weak to moderately negative correlations were apparent. The remaining 7 SROCCs ranged from a weak correlation of .1331 to a fairly strong correlation of .7187. The remaining positive SROCCs were clustered around .5000.

Table 5.10
Business Management Information Sources by APPDC Producer District:
Percentage Distribution of Responses

		Districts				
Information Source	Total	1 & 2	3 & 4	5 & 6	7 & 9	8
Accountant	12.8	19.5	20.5	6.3	0.0	8.5
Alberta Agriculture	7.9	7.3	12.8	18.8	4.8	2.1
Bank	9.1	9.8	10.3	18.8	9.5	4.3
District Agriculturalist	22.6	9.8	15.4	31.3	42.9	27.7
Newspapers/Magazines	11.6	4.9	7.7	6.3	4.8	25.5
Other Producers	4.3	7.3	5.1	0.0	4.8	2.1
Own Experience	13.4	17.1	10.3	6.3	0.0	21.3
Seminar	4.9	9.8	5.1	0.0	4.8	2.1
Short Course	3.7	7.3	2.6	0.0	9.5	0.0
Swine Specialist	5.5	4.9	2.6	6.3	9.5	6.4
Western Hog Journal	4.3	2.4	7.7	6.3	9.5	0.0
Total Percent	100.1	100.1	100.1	100.4	100.1	100.0
Total Number	(164)	(41)	(39)	(16)	(21)	(47)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .572$; $R_{S_{1,3}} = .133$; $R_{S_{1,4}} = -.430$; $R_{S_{1,5}} = .390$; $R_{S_{2,3}} = .719$; $R_{S_{2,4}} = -.246$;

$R_{S_{2,5}} = .506$; $R_{S_{3,4}} = .310$; $R_{S_{3,5}} = .508$ and $R_{S_{4,5}} = -.140$.

5.3.2.10 Business Management Information Sources by Years of Experience in the Pork Industry

Table 5.11 indicates the percentage distribution of the respondents with respect to the source of information used for business management controlled by the number of years of experience in the pork industry. There were thirteen information sources listed by 201 respondents to this section at a level of one percent or greater.

District Agriculturalists were the most frequent source used by all groups when considered in aggregate (25.4%), followed by Own Experience (15.9%). Accountants (10.4%), Newspapers/Magazines (9.0%), Alberta Agriculture (8.0%) and Banks (8.0%) were also among the frequently used business management information sources.

Information arising from the Alberta Agriculture infrastructure comprised 39.2% of the total sources indicated by the aggregate (District Agriculturalist (24.5%), Alberta Agriculture (8.0%), Swine Specialists (5.0%) and the Pork Production Handbook (1.5%). Almost one-fifth of the indicated sources stemmed from private agents (Accountants 10.4% and Banks 8.0%).

In the columns of Table 5.11, several results were markedly different than those found in their respective information source rows. Of the respondents indicating 10 years or less of experience, 4.7% (high) used the Pork Production Handbook for business management information. Alberta Agriculture was used by 5.8% (low) of the respondents with between 11 - 25 years of experience. Additionally, Radio and Seminars were used by 3.5% (high) and 5.8% (high), respectively, of this group.

The SROCCs for Table 5.11, comparing the ordering within the three different experience groups, were all positive. These ranged from .8310 to .8515, suggesting a strong correlation in the rankings of the listed information sources between the three experience groups.

Table 5.11
Business Management Information Sources by Years of Experience in Pork Industry: Percentage Distribution of Responses

Information Source	Total	Years of Experience in Pork Industry		
		10 or Less	11-25	26 +
Accountant	10.4	12.5	10.5	7.8
Alberta Agriculture	8.0	9.4	5.8	9.8
Bank	8.0	6.3	9.3	7.8
District Agriculturalist	25.4	23.4	25.6	27.5
Newspapers/Magazines	9.0	7.8	8.1	11.8
Other Producers	4.5	4.7	5.8	2.0
Own Experience	15.9	17.2	12.8	19.6
Pork Production Handbook	1.5	4.7	0.0	0.0
Radio	1.5	0.0	3.5	0.0
Seminars	4.0	3.1	5.8	2.0
Short Courses	2.5	3.1	2.3	2.0
Swine Specialist	5.0	4.7	5.8	3.9
Western Hog Journal	4.5	3.1	4.7	5.9
Total Percent	100.2	100.0	100.0	100.1
Total Number	(201)	(64)	(86)	(51)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{s_{1,2}}$ = .831; $R_{s_{1,3}}$ = .852 and $R_{s_{2,3}}$ = .851.

5.3.2.11 Business Management Information Sources by Number of Hogs Marketed in 1988

Table 5.12 indicates the percentage distribution of responses with respect to the source of information used for business management controlled for the number of hogs marketed in 1988. There were 14 information sources listed by the 202 respondents at a rate of greater than one percent.

District Agriculturalists were the most frequently listed (25.2%) source of business management information followed by Own Experience (15.3%), Accountants (9.9%) and Newspapers/Magazines (8.9%). Alberta Agriculture and Banks each garnered 7.9% of the aggregated total.

Information sources arising from the Alberta Agriculture infrastructure were listed by 39.6% of the 202 respondents. The next largest source was that of private agents 17.8% (Accountant 9.9% and Banks 7.9%).

In the columns of Table 5.12, several results were noticably different than those found in their respective information source rows. 25.8% (high) and 9.7% (high) of the respondents marketing 1 - 499 hogs used Own Experience and the Western Hog Journal, respectively. Alberta Agriculture and Radio were used by 13.2% (high) and 4.4% (high), respectively, of the respondents marketing 500 - 1499 hogs. 17.5% (high) of the producers marketing between 1500 and 2499 hogs used Banks for business management information. Finally, Private Consultants and Seminars were used by 7.5% (high) and 12.5% (high), respectively, of the respondents in the 2500+ category.

The six SROCCs comparing the four production level groups in Table 5.12 were all positive in sign. These figures ranged from a low correlation of .1765 (between the lowest and highest production groups) to a high correlation of .8005 (between 1 - 499 hogs and 500 - 1,499 hogs produced per year). The remaining four SROCCs showed moderate correlation (about .40) between the information sources ranked in the production level groups.

Table 5.12
Business Management Information Sources by Number of Hogs Marketed in 1988:
Percentage Distribution of Responses

Information Source	Total	Number of Hogs Marketed in 1988			
		1-499	500-1499	1500-2499	2500 +
Accountant	9.9	6.5	7.4	11.1	15.0
Alberta Agriculture	7.9	9.7	13.2	1.6	7.5
Bank	7.9	0.0	4.4	17.5	5.0
District Agriculturalist	25.2	29.0	26.5	25.4	20.0
Newspapers/Magazines	8.9	6.5	13.2	9.5	2.5
Other Producers	4.5	3.2	7.4	3.2	2.5
Own Experience	15.3	25.8	10.3	15.9	15.0
Pork Production Handbook	1.5	3.2	2.9	0.0	0.0
Private Consultant	2.0	0.0	0.0	1.6	7.5
Radio	1.5	0.0	4.4	0.0	0.0
Seminars	4.0	0.0	0.0	4.8	12.5
Short Courses	2.0	3.2	2.9	0.0	2.5
Swine Specialist	5.0	3.2	0.0	7.9	10.0
Western Hog Journal	4.5	9.7	7.4	1.6	0.0
Total Percent	100.1	100.0	100.0	100.1	100.0
Total Number	(202)	(31)	(68)	(63)	(40)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}}$ = .801; $R_{S_{1,3}}$ = .359; $R_{S_{1,4}}$ = .329; $R_{S_{2,3}}$ = .424; $R_{S_{2,4}}$ = .177 and $R_{S_{3,4}}$ = .731.

5.3.2.12 Business Management Information Sources by Proportion of Gross Farm Sales From Hogs in 1988

Table 5.13 indicates the percentage distribution of responses with respect to the source of information used for business management controlled by the proportion of gross farm sales from hogs in 1988. Fifteen information sources were listed by the 203 respondents to this section at a level of greater than one percent.

District Agriculturalists were listed by 25.1% of the total group. Own Experience (14.8%), Accountants (10.3%) and Newspapers/Magazines (8.92%) were also listed as information sources by the aggregate. Equal number of respondents (7.9%) indicated that they acquired business management information from Alberta Agriculture and Banks.

Information arising from Alberta Agriculture's infrastructure accounted for 39.4% of the business management information sources listed by the aggregate group (District Agriculturalist (25.1%), Alberta Agriculture (7.9%), Swine Specialists (4.9%) and the Pork Production Handbook (1.5%)).

In the columns of Table 5.13, several results were markedly different than those found in their respective information source rows. 16.0% (high) and 12.0% (high) of the respondents indicating a 25% or less proportion used Accountants and Alberta Agriculture, respectively. 8.0% (high) of this group each used the Pork Production Handbook and the Western Hog Journal and 0.0% (low) used banks for business management information. Of the respondents indicating a 76%+ proportion, 10.7% (high) and 3.9% (high) used Banks and Private Consultants, respectively.

The SROCCs used to compare the ordering of the varying information sources between the four proportion groups were all positive. These six statistics ranged from a low of .4515 (between the two lowest proportion groups) to a high of .7865 (between the two highest proportion groups). The remaining four figures were above .6007.

Table 5.13
Business Management Information Sources by Proportion of Gross Farm Sales from Hogs in 1988:
Percentage Distribution of Responses

		Proportion of Gross Farm Sales from Hogs in 1988			
Information Source	Total	25 or Less	26-50	51-75	76-100
Accountant	10.3	16.0	11.5	8.2	9.7
Alberta Agriculture	7.9	12.0	0.0	6.1	9.7
Bank	7.9	0.0	7.7	6.1	10.7
District Agriculturalist	25.1	24.0	34.6	28.6	21.4
Newspapers/Magazines	8.9	8.0	15.4	8.2	7.8
Other Producers	4.4	4.0	0.0	6.1	4.9
Own Experience	14.8	16.0	19.2	18.4	11.7
Pork Production Handbook	1.5	8.0	0.0	2.0	0.0
Private Consultant	2.0	0.0	0.0	0.0	3.9
Radio	1.5	0.0	0.0	2.0	1.9
Seminars	4.0	0.0	7.6	0.0	5.8
Short Courses	2.5	0.0	0.0	6.1	1.9
Swine Specialist	4.9	4.0	3.8	4.1	5.8
Western Hog Journal	4.4	8.0	0.0	4.1	4.9
Total Percent	100.1	100.0	99.8	100.0	100.1
Total Number	(203)	(25)	(26)	(49)	(103)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .451$; $R_{S_{1,3}} = .735$; $R_{S_{1,4}} = .640$; $R_{S_{2,3}} = .601$; $R_{S_{2,4}} = .706$ and $R_{S_{3,4}} = .787$.*

5.3.2.13 Government Programs and / or Policy Information Sources by APPDC Producer District

Table 5.14 shows the percentage distribution of responses with respect to the source used for gaining government programs and/or policy information controlled by APPDC producer district. There were nine of these information sources listed by 201 respondents at a level of greater than one percent.

Almost one-half (46.8%) of the aggregate group listed District Agriculturalists as being a source of the above mentioned information. In addition, almost one-fifth (19.4%) used Newspapers/Magazines and 12.4% used Radio.

Information from the Alberta Agriculture infrastructure were listed by 53.5% of the respondents (District Agriculturalist 46.8% and Alberta Agriculture 6.5%). Media sources in Mailouts/Publications, Media, Newspapers/Magazines and Radio were indicated by 34.8% of these producers.

In Table 5.14, one of the results was markedly different than those found in its information source row. District Agriculturalists were used by 77.8% (high) of the respondents from Districts 7 and 9.

All of the SROCCs comparing these five groups were positive. These figures ranged from .4823 (between Districts 5-6 and Districts 7-9) to a high correlation of .9114 (between Districts 3-4 and District 8). The remaining 8 SROCCs were at values of .5793 or greater.

Table 5.14
Government Programs and/or Policy Information Sources by APPDC Producer District: Percentage Distribution of Responses

		Districts				
Information Source	Total	1 & 2	3 & 4	5 & 6	7 & 9	8
Alberta Agriculture	6.5	6.1	6.3	6.5	0.0	9.1
APPDC	2.5	8.2	0.0	3.2	0.0	0.0
District Agriculturalist	46.8	36.7	41.7	45.2	77.8	50.9
Mailouts/Publications	1.5	4.1	2.1	0.0	0.0	0.0
Media	1.5	2.0	2.1	3.2	0.0	0.0
MLA	1.5	0.0	2.1	3.2	0.0	1.8
Newspapers/Magazines	19.4	20.4	29.2	9.7	5.6	20.0
Other Producers	4.5	8.2	4.2	3.2	5.6	1.8
Radio	12.4	10.2	8.3	22.6	5.6	14.5
University of Alberta	2.0	2.0	2.1	3.2	0.0	1.8
Western Hog Journal	1.5	2.0	2.1	0.0	5.6	0.0
Total Percent	100.1	99.9	100.2	100.0	100.2	99.9
Total Number	(201)	(49)	(48)	(31)	(18)	(55)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .714$; $R_{S_{1,3}} = .725$; $R_{S_{1,4}} = .670$; $R_{S_{1,5}} = .658$; $R_{S_{1,6}} = .812$; $R_{S_{2,3}} = .722$; $R_{S_{2,4}} = .911$; $R_{S_{2,5}} = .482$; $R_{S_{2,6}} = .904$ and $R_{S_{3,4}} = .579$.

5.3.2.14 Government Programs and / or Policy Information Sources by Years of Experience in Pork Industry

Table 5.15 shows the percentage distribution of responses with respect to the source of market information controlled by years of experience in the pork industry. Eleven information sources were listed by the 260 respondents at a rate of greater than one percent.

District Agriculturalists were listed most frequently (46.5%) by these respondents, followed by Newspapers/Magazines (18.8%) and Radio (11.2%).

There were two main categories into which the information sources listed by the responding producers could be placed. These were sources from Alberta Agriculture's infrastructure 53.4% (Alberta Agriculture and District Agriculturalists) and Media sources 36.2% (Mailouts/Publications, Media, Newspapers/Magazines, Radio and Television).

In the columns of Table 5.15, there were results which were noticably different than those found in their respective information source rows. Of the respondents indicating 11 - 25 years of experience, 3.6% (high) used the University of Alberta for acquiring government program and policy information. 0.0% (low) of producers with 26+ years of experience used Other Producers.

The SROCCs comparing these three pork industry experience groups were all positive in sign. All of these figures showed a moderate to strong correlation in the ranking of the information sources between the three groups. These statistics ranged from .6093, between the lowest and highest experience groups, to .7053 between the two lower experience groups.

Table 5.15
Government Programs and/or Policy Information Sources by Years of Experience in Pork Industry:
Percentage Distribution of Responses

Information Source	Total	Years of Experience in Pork Industry		
		10 or Less	11-25	26 +
Alberta Agriculture	6.9	2.5	8.0	10.3
APPDC	1.9	2.5	0.9	2.9
District Agriculturalist	46.5	52.5	43.8	44.1
Mailouts/Publications	3.8	6.3	3.6	1.5
Media	1.2	2.5	0.0	1.5
MLA	2.7	0.0	3.6	4.4
Newspapers/Magazines	18.8	13.8	20.5	22.1
Other Producers	4.2	7.5	4.5	0.0
Radio	11.2	11.3	9.8	13.2
Television	1.2	1.3	1.8	0.0
University of Alberta	1.5	0.0	3.6	0.0
Total Percent	99.9	100.2	100.1	100.0
Total Number	(260)	(80)	(112)	(68)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .705$; $R_{S_{1,3}} = .609$ and $R_{S_{2,3}} = .687$.

5.3.2.15 Government Programs and / or Policy Information Sources by Number of Hogs Marketed in 1988

Table 5.16 indicates the percentage distribution of responses with respect to the source of information about government programs and policies controlled for the number of hogs marketed in 1988. There were ten information sources listed by 256 respondents at a level of one percent or greater.

Of the ten information sources listed by the aggregate group of respondents, that of District Agriculturalist was most frequently listed (46.9%). Newspapers/Magazines (19.1%), Radio (11.3%) and Alberta Agriculture (7.0%) were also among those information sources which were listed often.

Information sources provided by Alberta Agriculture (Alberta Agriculture 7.0% and District Agriculturalist) comprised the largest common group listed (53.9%) followed by Media (Mailouts/Publications, Media, Newspapers/Magazines and Radio) indicated by 35.5% of the aggregate respondents.

The SROCCs comparing the farm production level groups in Table 5.16 were all positive. These six statistics ranged evenly from a low of .8390 (between 500 - 1,499 hogs and 2,500 + hogs in 1988) to a high of .9255 (between the two highest production level groups). All of these SROCCs point to a high correlation in the rankings of the information sources between the four production level groups.

Table 5.16
Government Programs and/or Policy Information Sources by Number of Hogs Marketed in 1988: Percentage Distribution of Responses

		Number of Hogs Marketed in 1988			
Information Source	Total	1-499	500-1499	1500-2499	2500 +
Alberta Agriculture	7.0	5.9	7.6	6.3	8.7
APPDC	2.0	0.0	1.3	3.8	2.2
District Agriculturalist	46.9	49.0	45.6	47.5	45.7
Mailouts/Publications	3.9	3.9	2.5	5.0	4.3
Media	1.2	0.0	0.0	3.8	0.0
MLA	2.7	3.9	2.5	3.8	0.0
Newspapers/Magazines	19.1	13.7	24.1	17.5	19.6
Other Producers	4.3	5.9	1.3	5.0	6.5
Radio	11.3	15.7	13.9	6.3	10.9
University of Alberta	1.6	2.0	1.3	1.3	2.2
Total Percent	100.0	100.0	100.1	100.3	100.1
Total Number	(256)	(51)	(79)	(80)	(46)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .882$; $R_{S_{1,3}} = .894$; $R_{S_{1,4}} = .902$; $R_{S_{2,3}} = .868$; $R_{S_{2,4}} = .839$ and $R_{S_{3,4}} = .926$.

5.3.2.16 Government Programs and / or Policy Information Sources by Proportion of Gross Farm Sales from Hogs in 1988

Table 5.17 indicates the percentage distribution of responses with respect to the source of government program and policy information controlled by the proportion of gross farm sales from hogs in 1988. Twelve sources of government program and policy information were recorded from the 264 respondents at a level of one percent of greater.

District Agriculturalists were indicated by 45.1% of the aggregate group as being their source of government program and policy information. Newspapers/Magazines (18.6%), Radio (11.0%) and Alberta Agriculture (6.8%) were also referred to as information sources.

Alberta Agriculture sources (District Agriculturalists (45.1%) and Alberta Agriculture (6.8%)) comprised over one-half of the responses to this section. The six media sources (Mailouts/Publications, Media, Newspapers/Magazines, Radio, Television and the Western Hog Journal) listed in Table 5.17 comprised 37.9% of the total information sources indicated.

All of the SROCCs comparing the farm groups in Table 5.17 were positive in sign. These six statistics ranged from .5188 (between the 26 - 50% and 76 - 100% proportions) and .8857 (between the two highest proportions). The remaining four figures were evenly distributed with this range.

Table 5.17
Government Programs and/or Policy Information Sources by Proportion of Gross Farm Sales from Hogs in 1988:
Percentage Distribution of Responses

Information Source	Total	Proportion of Gross Farm Sales from Hogs in 1988			
		25 or Less	26-50	51-75	76-100
Alberta Agriculture	6.8	7.3	9.8	5.0	6.6
APPDC	1.9	0.0	7.3	1.7	0.8
District Agriculturalist	45.1	48.8	43.9	43.3	45.1
Mailouts/Publications	3.8	4.9	2.4	5.0	3.3
Media	1.1	0.0	0.0	3.3	0.8
MLA	2.7	4.9	4.9	5.0	0.0
Newspapers/Magazines	18.6	17.1	22.0	21.7	16.4
Other Producers	4.2	2.4	2.4	3.3	5.7
Radio	11.0	12.2	4.9	8.3	13.9
Television	1.1	0.0	0.0	0.0	2.5
University of Alberta	1.5	0.0	2.4	3.3	0.8
Western Hog Journal	2.3	2.4	0.0	0.0	4.1
Total Percent	100.1	100.0	100.0	99.9	100.0
Total Number	(264)	(41)	(41)	(60)	(122)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .728$; $R_{S_{1,3}} = .886$; $R_{S_{1,4}} = .784$; $R_{S_{2,3}} = .765$; $R_{S_{2,4}} = .519$ and $R_{S_{3,4}} = .594$.

5.3.2.17 Breeding Stock Information Sources by APPDC Producer District

Table 5.18 shows the percentage distribution of responses with respect to the source of breeding stock information controlled by the APPDC producer districts. There were 11 sources of information listed by the 133 respondents at a rate of one percent or greater.

The percentage spread between the top five information sources used by producers, as indicated by the 113 respondents, was narrow compared to previous tables analyzed. Other Producers were used by 16.5% of responding producers, followed by Breeders and the Western Hog Journal which were each indicated by 13.5% of these producers. Equal numbers (12.8%) of respondents each said that they used Newspapers/Magazines and Agribusiness Suppliers as breeding stock information sources.

In the columns of Table 5.18, several results were markedly different than those found in their respective information source rows. 15.8% (high) of the respondents from Districts 1 and 2 used an A. I. Unit. Own Experience and Pig Improvement Canada were used by 10.5% (high) and 21.1% (high), respectively, of the producers from districts 5 and 6. In addition, Newspapers /—

Magazines were used by 0.0% (low) of this group. Respondents from Districts 7 and 9 used District Agriculturalists and the Western Hog Journal at levels of 23.1% (high) and 30.8% (high), respectively. Alberta Swine Breeders Association was used by 0.0% (low) of the respondents in District 8 and Breeders were used by 33.3% (high) of this group for acquiring breeding stock information.

There were ten SROCCs arising from the comparison of the five district groups. Of these, three were negative in sign. The SROCC comparing Districts 1 - 2 and 8 was -.0836, the statistic comparing Districts 1 - 2 and 7 - 9 was -.2203 and it was -.0832 between Districts 5 - 6 and 7 - 9. The remaining seven SROCCs were positive and ranged from a low of .0047 (between Districts 5 - 6 and 8) to a moderate correlation of .5430 (between Districts 1 - 2 and 3 - 4).

Table 5.18
Breeding Stock Information Sources by APPDC Producer District;
Percentage Distribution of Responses

		Districts				
Information Source	Total	1 & 2	3 & 4	5 & 6	7 & 9	8
A.I. Unit	6.8	15.8	9.1	0.0	0.0	0.0
Agribusiness Suppliers	12.8	21.1	12.1	15.8	0.0	6.7
Alberta Swine Breeders Assoc.	3.8	5.3	3.0	5.3	7.7	0.0
Breeders	13.5	5.3	9.1	5.3	15.4	33.3
District Agriculturalist	8.3	0.0	6.1	5.3	23.1	16.7
Newspapers/Magazines	12.8	5.3	15.2	0.0	15.4	26.7
Other Producers	16.5	15.8	24.2	26.3	7.7	6.7
Own Experience	3.0	2.6	3.0	10.5	0.0	0.0
Pig Improvement Canada	6.8	7.9	3.0	21.1	0.0	3.3
Test Center	2.3	5.3	0.0	0.0	0.0	3.3
Western Hog Journal	13.5	15.8	15.2	10.5	30.8	3.3
Total Percent	100.1	100.2	100.0	100.1	100.1	100.0
Total Number	(133)	(38)	(33)	(19)	(13)	(30)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}}$ = .543; $R_{S_{1,3}}$ = .389; $R_{S_{1,4}}$ = -.220; $R_{S_{1,5}}$ = -.086; $R_{S_{2,3}}$ = .257; $R_{S_{2,4}}$ = .486; — $R_{S_{2,5}}$ = .475; $R_{S_{3,4}}$ = -.083; $R_{S_{3,5}}$ = .005 and $R_{S_{4,5}}$ = .526.

5.3.2.18 Breeding Stock Information Sources by Years of Experience in Pork Industry

Table 5.19 shows the percentage distribution of responses with respect to the source of breeding stock information controlled by years of experience in the pork industry. Fourteen information sources were indicated by 184 respondents at levels of one percent or more.

The percentages for the various information sources as indicated by the 184 respondents were all below 20%. Other Producers were mentioned as an information source by 16.3% of this group, followed by Breeders (14.1%), the Western Hog Journal (12.0%) and Newspapers/Magazines (11.4%). There was no particular group, association or entity which, when considered in aggregate, dominated as a source of breeding stock information.

In the columns of Table 5.19, there were results that were noticeably different than those found in their respective information source rows. 7.2% (high) of the respondents with 11 - 25 years of experience used Pig Improvment Canada. Also, A. I. Unit was used by 0.0% (low) of the producers indicating 26+ years of experience and the Western Hog Journal was used by 20.0% (high) of this group for acquiring breeding stock information.

All of the SROCCs which compare the rank orderings for the three groups in Table 5.19 were positive in sign. These correlation coefficients were moderately high, ranging from .5446, between the lowest and highest experience level groups, to .6722, between the two lower experience level groups.

Table 5.19
Breeding Stock Information Sources by Years of Experience in Pork Industry:
Percentage Distribution of Responses

Information Source	Total	Years of Experience in Pork Industry		
		10 or Less	11-25	26 +
A.I. Unit	5.4	10.7	4.8	0.0
Agribusiness Suppliers	9.2	7.1	9.6	11.1
Alberta Swine Breeders Assoc.	4.9	3.6	4.8	6.7
Breeders	14.1	17.9	14.5	8.9
District Agriculturalist	7.1	5.4	6.0	11.1
Farm Shows	2.2	3.6	1.2	2.2
Newspapers/Magazines	11.4	8.9	10.8	15.6
Other Producers	16.3	16.1	20.5	8.9
Own Experience	3.3	1.8	2.4	6.7
Pig Improvement Canada	4.9	1.8	7.2	4.4
Swine Specialist	1.6	3.6	1.2	0.0
Test Center	1.6	0.0	3.6	0.0
Veterinarian	6.0	5.4	7.2	4.4
Western Hog Journal	12.0	14.3	6.0	20.0
Total Percent	100.0	100.2	99.8	100.0
Total Number	(184)	(56)	(83)	(45)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .672$; $R_{S_{1,3}} = .545$ and $R_{S_{2,3}} = .619$.

5.3.2.19 Breeding Stock Information Sources by Number of Hogs Marketed in 1988

Table 5.20 indicates the percentage distribution of responses with respect to the source of breeding stock information controlled by the number of hogs marketed in 1988. There were fourteen breeding stock information sources listed at levels of one percent or greater by 183 respondents.

Other Producers were indicated most frequently (16.4%) as a breeding stock information source by the aggregate group of respondents. In addition, Breeders (14.2%), the Western Hog Journal (12.0%) and Newspapers/Magazines (11.5%) were mentioned at similar levels as being information sources. There was no extension infrastructure or entity that dominated as a source of breeding stock information in Table 7.53.

In the columns of Table 5.20, several of the results were markedly different than those found in their respective information source rows. Agribusiness Suppliers were used by 2.9% (low) of the respondents marketing 1 - 499 hogs. Veterinarians were used at increasing levels (2.9% - 10.3%) by respondents as the indicated number of hogs marketed increased. Newspapers / Magazines were used by 20.7% (high) of the respondents marketing 2500+ hogs for obtaining breeding stock information. In addition, 13.8% (high) and 10.3% (high) of the producers in this group used A. I. Unit and Alberta Swine Breeders Association, respectively.

The SROCCs used to compare the rank orders between the four production level groups were all positive in sign. These statistics ranged from almost no correlation (.0023), between the lowest and highest production groups, to a strong correlation indicated by .8271 (between the two middle production groups in Table 5.20). The four remaining SROCCs were all at levels of .4471 or above.

Table 5.20
Breeding Stock Information Sources by Number of Hogs Marketed in 1988:
Percentage Distribution of Responses

		Number of Hogs Marketed in 1988			
Information Source	Total	1-499	500-1499	1500-2499	2500 +
A.I. Unit	5.5	2.9	4.5	3.8	13.8
Agribusiness Suppliers	9.3	2.9	10.4	11.3	10.3
Alberta Swine Breeders Assoc.	4.9	2.9	3.0	5.7	10.3
Breeders	14.2	14.7	16.4	15.1	6.9
District Agriculturalist	7.1	11.8	4.5	9.4	3.4
Farm Shows	1.6	2.9	3.0	0.0	0.0
Newspapers/Magazines	11.5	11.8	9.0	9.4	20.7
Other Producers	16.4	20.6	19.4	13.2	10.3
Own Experience	3.3	5.9	3.0	3.8	0.0
Pig Improvement Canada	4.9	0.0	6.0	5.7	6.9
Swine Specialist	1.6	5.9	0.0	1.9	0.0
Test Center	1.6	0.0	1.5	1.9	3.4
Veterinarian	6.0	2.9	3.0	9.4	10.3
Western Hog Journal	12.0	14.7	16.4	9.4	3.4
Total Percent	99.9	99.9	100.1	100.0	99.7
Total Number	(183)	(34)	(67)	(53)	(29)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .586$; $R_{S_{1,3}} = .588$; $R_{S_{1,4}} = .002$; $R_{S_{2,3}} = .827$; $R_{S_{2,4}} = .487$ and $R_{S_{3,4}} = .509$.

5.3.2.20 Breeding Stock Information Sources by Proportion of Gross Farm Sales from Hogs in 1988

Table 5.21 shows the percentage distribution of responses with respect to the source of breeding stock information controlled by the proportion of gross farm sales from hogs in 1988. There were fifteen information sources indicated at a level of one percent or greater by the 186 respondents to this section.

Other Producers were used as breeding stock information sources by 16.1% of the aggregate group of respondents. About one-seventh (14.0%) of these producers used Breeders for acquiring breeding stock information, and 11.8% used the Western Hog Journal. Newspapers/Magazines (11.3%) and Agribusiness Suppliers (9.1%) were also among those information sources used to gain breeding stock information. In Table 7.21, as is common with Tables 7.18, 7.19 and 7.20, there is no particular extension infrastructure or entity that dominates as a breeding stock information source.

In the columns of Table 5.21, several results were noticeably different than those found in their respective information source rows. Pig Improvement Canada was used by 0.0% (low) of the respondents indicating a 25% or less proportion. In addition, District Agriculturalists and Other Producers were used by 21.4% (high) and 7.1% (low), respectively, of the respondents indicating the 51 to 75% proportion.

All of the SROCCs comparing the four groups of hog sale proportions were positive in sign. These statistics ranged in value from a low of .2680 (between the 25% or less and 51 - 75% groups) to a high correlation of .8751 (between the two upper proportion groups). The remaining four SROCCs were all .4868 or less in value.

Table 5.21
Breeding Stock Information Sources by Proportion of Gross Farm Sales from Hogs in 1988: Percentage Distribution of Responses

		Proportion of Gross Farm Sales from Hogs in 1988			
Information Source	Total	25 or Less	26-50	51-75	76-100
A.I. Unit	5.4	9.5	0.0	4.4	5.4
Alberta Swine Breeders Assoc.	4.8	0.0	0.0	8.9	7.6
Breeders	14.0	9.5	21.4	6.7	9.8
District Agriculturalist	7.0	9.5	10.7	2.2	5.4
Farm Shows	1.6	4.8	3.6	0.0	1.1
Newspapers/Magazines	11.3	9.5	10.7	11.1	8.7
Other Producers	16.1	14.3	7.1	20.0	17.4
Own Experience	3.2	4.8	7.1	2.2	3.3
Pig Improvement Canada	4.8	0.0	10.7	13.3	6.5
Sales Notices/Flyers	2.7	0.0	0.0	4.4	3.3
Suppliers	9.1	14.3	7.1	4.4	6.5
Swine Specialist	1.6	4.8	3.6	0.0	1.1
Test Center	1.6	4.8	3.6	2.2	1.1
Veterinarian	4.8	0.0	3.6	4.4	8.7
Western Hog Journal	11.8	14.3	10.7	15.6	14.1
Total Percent	99.8	100.1	99.9	99.8	100.0
Total Number	(186)	(21)	(28)	(45)	(92)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .487$; $R_{S_{1,3}} = .268$; $R_{S_{1,4}} = .420$; $R_{S_{2,3}} = .363$; $R_{S_{2,4}} = .485$ and $R_{S_{3,4}} = .875$.

5.3.2.21 Disease Prevention and Control Information Sources by APPDC Producer District

Table 5.22 indicates the percentage distribution of responses with respect to sources of disease prevention and control information controlled for APPDC Producer District. There were twelve information sources listed by 219 respondents at a level of one percent or greater.

58.9% of producers said that Veterinarians were their source of disease prevention and control. In addition, the combined percentage total of indicated information sources arising from Alberta Agriculture's infrastructure was 15.1% (Alberta Agriculture, District Agriculturalists, O.S. Longman Building, Pork Production Handbook and Swine Specialists).

In Table 7.61 respondents used Veterinarians for obtaining disease prevention and control information at levels ranging from 46.9% in District 1 and 2 to 71.4% in District 3 and 4. With one information source dominating the responses, there were only a few producers who identified

any of the remaining 11 sources. In the column for District 1 and 2, 12.2% said they got information from the Western Hog Journal and 10.2% indicated a Feed Company. Of the 36 respondents in the District 5 and 6 response column, 13.9% made use of a Feed Company for disease prevention and control information. There were 10% of the respondents in the District 7 and 9 group who used District Agriculturalists and the same number who said that the O.S. Longman Building as an information source.

The SROCCs comparing the five APPDC District columns in Table 5.22 were all positive. The statistics arising from the comparison of District 7 and 9 with the other four groups were the lowest among the ten, ranging from .0638 (District 1 and 2) to .4487 (District 8). The remaining six SROCCs ranged from .5037 (between District 3 - 4 and 5 - 6) to .7009 (between Districts 5 - 6 and 8).

Table 5.22
Disease Prevention and Control Information Sources by APPDC Producer District: Percentage Distribution of Responses

		Districts				
Information Source	Total	1 & 2	3 & 4	5 & 6	7 & 9	8
Alberta Agriculture	4.1	4.1	2.0	8.3	5.0	3.1
District Agriculturalist	5.0	4.1	2.0	2.8	10.0	7.7
Feed Company	7.8	10.2	4.1	13.9	0.0	7.7
Herd Health	1.4	4.1	0.0	2.8	0.0	0.0
Newspapers/Magazines	6.4	8.2	8.2	2.8	5.0	6.2
O.S. Longman Building	2.3	0.0	0.0	5.6	10.0	1.5
Pig Letter	1.4	2.0	4.1	0.0	0.0	0.0
Pork Production Handbook	1.4	4.1	0.0	0.0	5.0	0.0
Short Course	1.4	2.0	2.0	0.0	5.0	0.0
Swine Specialist	2.3	2.0	0.0	0.0	5.0	4.6
Veterinarian	58.9	46.9	71.4	55.6	50.0	63.1
Western Hog Journal	7.8	12.2	6.1	8.3	5.0	6.2
Total Percent	100.2	99.9	99.9	100.1	100.0	100.1
Total Number	(219)	(49)	(49)	(36)	(20)	(65)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .700$; $R_{S_{1,3}} = .678$; $R_{S_{1,4}} = .064$; $R_{S_{1,5}} = .680$; $R_{S_{2,3}} = .504$; $R_{S_{2,4}} = .095$; $R_{S_{2,5}} = .606$; $R_{S_{3,4}} = .265$; $R_{S_{3,5}} = .701$ and $R_{S_{4,5}} = .449$.

5.3.2.22 Disease Prevention and Control Information Sources by Years of Experience in the Pork Industry

Table 5.23 shows the percentage distribution of responses with respect to the source of disease prevention and control information controlled by the number of years of experience in the pork industry. There were fourteen information sources indicated by 287 respondents at a level of one percent or greater.

The majority (58.2%) of the 287 respondents to this section indicated Veterinarians as their source of disease prevention and control information. There were five publications (Country Guide, Newspapers/Magazines, Pig Letter, Pork Production Handbook and the Western Hog Journal) listed for a combined use of 17.4%. In addition, information sources arising from Alberta Agriculture infrastructure (Alberta Agriculture, District Agriculturalist, O.S. Longman Building, Pork Production Handbook and Swine Specialists) were indicated as being used by 14.2% of this group.

Veterinarians were used most by the three experience level groups, ranging from 52.9% (10 or less years) to 64.2% (11-25 years). In the lowest experience group, the Western Hog Journal was indicated by 9.4% of the 85 producers. In the upper experience group, Feed Company and the Western Hog Journal were each used by 10.1% of the 79 respondents.

The SROCCs comparing the three experience groups were all positive. The comparison of the two lower experience groups yielded a statistic of .5000 and the upper and lower groups yielded a figure of .8673.

Table 5.23
Disease Prevention and Control Information Sources by Years of Experience in Pork Industry: Percentage Distribution of Responses

Information Source	Total	Years of Experience in Pork Industry		
		10 or Less	11-25	26 +
Alberta Agriculture	3.8	7.0	2.4	2.5
Country Guide	1.7	1.2	2.4	1.3
District Agriculturalist	5.2	5.9	5.7	3.8
Feed Company	7.0	5.9	5.7	10.1
Herd Health	1.1	1.2	0.8	1.3
Newspapers/Magazines	6.6	5.9	6.5	7.6
O.S. Longman Building	2.1	2.4	1.6	2.5
Other Producers	2.1	1.2	3.3	1.3
Pig Letter	1.1	0.0	1.6	1.3
Pork Production Handbook	1.4	3.5	0.0	1.3
Short Courses	1.4	2.4	0.8	1.3
Swine Specialist	1.7	1.2	2.4	1.3
Veterinarian	58.2	52.9	64.2	54.4
Western Hog Journal	6.6	9.4	2.4	10.1
Total Percent	100.0	100.1	99.8	100.1
Total Number	(287)	(85)	(123)	(79)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .500$; $R_{S_{1,3}} = .867$ and $R_{S_{2,3}} = .707$.

5.3.2.23 Disease Prevention and Control Information Sources by Number of Hogs Marketed in 1988

Table 5.24 indicates the percentage distribution of responses with respect to sources of disease prevention and control information controlled by the number of hogs marketed in 1988. Thirteen information sources were listed by 279 respondents at levels of one percent or greater.

Veterinarians were listed by 59.5% of the 279 respondents as being their source of disease prevention and control information. Five media entities (Country Guide, Newspapers/Magazines, Pig Letter, the Pork Production Handbook and the Western Hog Journal) were listed by respondents as information sources for a combined total of 17.2%. Information sources made available by Alberta Agriculture (Alberta Agriculture, District Agriculturalists, O.S. Longman Building, Pork Production Handbook and Swine Specialists) were listed by 13.7% of the 279 respondents.

In all four of the production level groups Veterinarians were listed as being disease prevention and control information sources by a majority of the respondents. The levels of respondents indicated increased gradually from 55.4% to 66.7% as the production level groups increased. In the lowest production level group (1 - 499 hogs in 1988) District Agriculturalists and Feed Company were each indicated by 10.7% of the 56 respondents. 12.9% of the 93 producers in the 500 - 1,499 hogs per year group used the Western Hog Producers as their source of this information. In the 1,500 - 2,499 hogs in 1988 group, Feed Company and Newspapers/Magazines were each said to be disease prevention and control information sources by 8.5% of the 82 respondents. 8.3% of the respondents in the upper production level group used Newspapers/Magazines.

The SROCCs comparing the rank ordering of the information sources within the four production level groups were all positive in sign. The correlation coefficients comparing the upper production level group (2,500 +) with the other three were all low in value, ranging from .0015 (1 - 499) to .1282 (1,500 - 2,499). The three remaining SROCCs ranged from .7871 (between 500 - 1,499 and 1,500 - 2,499) to .8693 (between 1-499 and 1,500 - 2,499).

Table 5.24
Disease Prevention and Control Information Sources by Number of Hogs Marketed in 1988: Percentage Distribution of Responses

		Number of Hogs Marketed in 1988			
Information Source	Total	1-499	500-1499	1500-2499	2500 +
Alberta Agriculture	3.6	5.4	3.2	3.7	2.0
Country Guide	1.4	0.0	1.1	2.4	2.1
District Agriculturalist	5.0	10.7	3.2	6.1	0.0
Feed Company	7.5	10.7	7.5	8.5	2.1
Herd Health	1.1	0.0	1.1	1.2	2.1
Newspapers/Magazines	6.8	5.4	5.4	8.5	8.3
O.S. Longman Building	2.2	1.8	2.2	1.2	4.2
Other Producers	2.2	1.8	4.3	1.2	0.0
Pig Letter	1.1	0.0	0.0	0.0	6.3
Pork Production Handbook	1.1	1.8	0.0	1.2	2.1
Swine Specialist	1.8	1.8	1.1	2.4	2.1
Veterinarian	59.5	55.4	58.1	59.8	66.7
Western Hog Journal	6.8	5.4	12.9	3.7	2.1
Total Percent	100.1	100.2	100.1	99.9	100.1
Total Number	(279)	(56)	(93)	(82)	(48)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}}$ = .808; $R_{S_{1,3}}$ = .870; $R_{S_{1,4}}$ = .002; $R_{S_{2,3}}$ = .787; $R_{S_{2,4}}$ = .076 and $R_{S_{3,4}}$ = .128.

5.3.2.24 Disease Prevention and Control Information Sources by Proportion of Gross Farm Sales from Hogs in 1988

Table 5.25 indicates the percentage distribution of responses with respect to sources of disease prevention and control information controlled for the proportion of gross farm sales derived from hog sales in 1988. Fourteen information sources were listed by 286 respondents at levels of one percent or greater.

58.0% of the aggregated respondents said Veterinarians were their source of disease prevention and control information. Publications and other written material (Country Guide, Newspapers/Magazines, Pig Letter, the Pork Production Handbook and the Western Hog Journal) comprised 17.8% of the total responses. In addition, the combined percentage total for

information sources arising from Alberta Agriculture's infrastructure (Alberta Agriculture, District Agriculturalists, O.S. Longman Building, Pork Production Handbook and Swine Specialists) was 13.9%.

As was also the case with the previous three tables (5.22, 5.23 and 5.24) dealing with information sources for disease prevention and control, Table 5.25 also shows a majority (54.2% (26-50%) to 61.0% (25% or less)) of Veterinary use by producers in the various sales proportion categories. In the lowest sales proportion category, 12.2% of the 41 respondents indicated the use of a District Agriculturalist. There were 10.4% of the 48 respondents in the 26-50% sales proportion group said they got information from Feed Companies. The Western Hog Journal was used by 11.5% of the 61 respondents in the 51-75% proportion group. In the highest sales proportion group (76-100%), Newspapers/Magazines (7.4%) and the Western Hog Journal (6.6%) were used by the 136 respondents.

The SROCCs comparing the four sales proportion groups were all positive in sign. These statistics ranged in value from a moderate correlation of .4147 (between 26-50% and 76-100%) to a strong correlation of .7063. The four remaining SROCCs were above .5862 in value.

Table 5.25
Disease Prevention and Control Information Sources by Proportion of Gross Farm Sales from Hogs in 1988:
Percentage Distribution of Responses

		Proportion of Gross Farm Sales from Hogs in 1988			
Information Source	Total	25 or Less	26-50	51-75	76-100
Alberta Agriculture	3.5	2.4	4.2	3.3	3.7
Country Guide	2.1	0.0	8.3	1.6	0.7
District Agriculturalist	5.2	12.2	2.1	3.3	5.2
Feed Company	7.0	7.3	10.4	8.2	5.2
Herd Health	1.1	0.0	0.0	0.0	2.2
Newspapers/Magazines	6.6	4.9	6.3	6.6	7.4
O.S. Longman Building	2.1	2.4	2.1	3.3	1.5
Other Producers	2.1	4.9	4.2	0.0	1.5
Pig Letter	1.1	0.0	0.0	1.6	1.5
Pork Production Handbook	1.4	0.0	0.0	0.0	2.9
Short Courses	1.4	2.4	2.1	1.6	0.7
Swine Specialist	1.7	0.0	2.1	1.6	2.2
Veterinarian	58.0	61.0	54.2	57.4	58.8
Western Hog Journal	6.6	2.4	4.2	11.5	6.6
Total Percent	99.9	99.9	100.2	100.0	100.1
Total Number	(286)	(41)	(48)	(61)	(136)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .623$; $R_{S_{1,3}} = .656$; $R_{S_{1,4}} = .587$; $R_{S_{2,3}} = .668$; $R_{S_{2,4}} = .415$ and $R_{S_{3,4}} = .706$.

5.3.2.25 Nutritional Information Sources by APPDC Producer District

Table 5.26 indicates the percentage distribution of responses with respect to the source of nutritional information controlled by APPDC Producer District. There were thirteen informational sources listed by 244 respondents at levels of one percent or greater.

There were 65.2% of the 244 respondents who said that they received nutritional information from a Feed Company. An additional 3.3% indicated the use of Nutritionalist/Feed Company. These two sources combined for a total of 68.5% of this group's responses. Sources arising from Alberta Agriculture's infrastructure (Alberta Agriculture, District Agriculturalist, and Swine Specialist) comprised 6.9% of the information sources used by the aggregate group. Publications and sources of literature (Feeders' Day Report, Newspapers/Magazines, Publications, and the Western Hog Journal) comprised 11.0% of the nutritional information sources listed by this group.

Nine of the ten SROCCs comparing the rank ordering of information sources within the five APPDC Producer District groups (in Table 5.26) were positive in sign. These figures tended to be low in value, ranging from .0886 (between Districts 3-4 and 7-9) to .4699 (between Districts 3-4 and 8). The remaining seven statistics were distributed evenly within this range. The SROCC comparing the rank ordering of the information sources between Districts 5-6 and 8 resulted in a figure valued at -.0060.

Table 5.26
Nutritional Information Sources by APPDC Producer District:
Percentage Distribution of Responses

		Districts				
Information Source	Total	1 & 2	3 & 4	5 & 6	7 & 9	8
Alberta Agriculture	3.7	3.4	3.5	5.1	0.0	4.6
District Agriculturalist	1.2	0.0	3.5	2.6	0.0	0.0
Feed Company	65.2	54.2	57.9	74.4	83.3	69.2
Feeders' Day Report	1.2	5.1	0.0	0.0	0.0	0.0
Newspapers/Magazines	3.7	3.4	5.3	2.6	0.0	4.6
Nutritionalist/Feed Co.	3.3	1.7	0.0	0.0	8.3	7.7
Pork Meetings	1.6	1.7	1.8	2.6	4.2	0.0
Publications	1.6	3.4	1.8	0.0	0.0	1.5
Seminars	1.2	3.4	0.0	2.6	0.0	0.0
Swine Specialist	2.0	1.7	3.5	0.0	0.0	3.1
University of Alberta	5.7	11.9	7.0	2.6	0.0	3.1
Veterinarian	4.9	3.4	10.5	0.0	0.0	6.2
Western Hog Journal	4.5	6.8	5.3	7.7	4.2	0.0
Total Percent	99.8	100.1	100.1	100.2	100.0	100.0
Total Number	(244)	(59)	(57)	(39)	(24)	(65)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}}$ = .467; $R_{S_{1,3}}$ = .428; $R_{S_{1,4}}$ = .139; $R_{S_{1,5}}$ = .167; $R_{S_{1,6}}$ = .458; $R_{S_{1,7}}$ = .089;

$R_{S_{2,3}}$ = .470; $R_{S_{2,4}}$ = .378; $R_{S_{2,5}}$ = .006 and $R_{S_{4,5}}$ = .271.

5.3.2.26 Nutritional Information Sources by Years of Experience in the Pork Industry

Table 5.27 indicates the percentage distribution of responses with respect to sources of nutritional information controlled by the number of years in the pork industry. Fourteen information sources were listed by 309 respondents at levels of one percent or greater.

There were 54.7% of the 309 respondents who indicated using a Feed Company to obtain nutritional information. Nutritionalist/Feed Company (3.2%) were also listed by this group. Five literature sources (Feeders' Day Report, Newspapers/Magazines, Pork Production Handbook, Publications and the Western Hog Journal) were listed by 12.6% of this group as being their nutritional information source. In addition, four information sources derived from Alberta Agriculture's infrastructure (Alberta Agriculture, District Agriculturalist, Pork Production Handbook and Swine Specialist) were listed by 9.4% of the total number of respondents.

The SROCCs comparing the rank order of the information sources within the three experience level groups were all positive in sign. These three figures ranged in value from .5870, between the highest and lowest experience level group, to .8632 between the two highest experience level groups.

Table 5.27
Nutrition Information Sources by Years of Experience in Pork Industry:
Percentage Distribution of Responses

Information Source	Total	Years of Experience in Pork Industry		
		10 or Less	11-25	26 +
Alberta Agriculture	3.9	5.3	3.6	2.6
District Agriculturalist	1.9	2.1	2.2	1.3
Feed Company	64.7	61.7	62.8	71.8
Feeders' Day Report	1.0	1.1	0.7	1.3
Newspapers/Magazines	4.5	3.2	4.4	6.4
Nutritionalist/Feed Company	3.2	4.3	3.6	1.3
Pork Meetings	1.0	1.1	1.5	0.0
Pork Production Handbook	1.3	4.3	0.0	0.0
Publications	1.3	2.1	1.5	0.0
Seminars	1.0	0.0	1.5	1.3
Swine Specialist	2.3	2.1	2.9	1.3
University of Alberta	4.9	4.3	5.8	3.8
Veterinarian	4.5	3.2	5.8	3.8
Western Hog Journal	4.5	5.3	3.6	5.1
Total Percent	100.0	100.1	99.9	100.0
Total Number	(309)	(94)	(137)	(78)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .624$; $R_{S_{1,3}} = .587$ and $R_{S_{2,3}} = .863$.

5.3.2.27 Nutrition Information Sources by Number of Hogs Marketed in 1988

Table 5.28 indicates the percentage distribution of responses with respect to nutritional information sources controlled by the number of hogs marketed in 1988. There were 14 information sources listed by 303 respondents at a level of one percent or greater.

Feed Company was indicated by the majority (65.3%) of the aggregate group of respondents as being their source of nutrition information. Information sources arising from Alberta Agriculture's infrastructure (Alberta Agriculture, District Agriculturalist, Pork Production Handbook, and Swine Specialist) comprised 10.2% of the information sources used by this group of respondents. Literature sources and publications (Feeders' Day Report, Newspapers/Magazines, Pork Production Handbook, Publications and the Western Hog Journal) were used by 12.2% of the total respondents for nutrition information.

The six SROCCs comparing the rank ordering of the information sources within the four production level groups were all positive in sign. These figures ranged in value from .3742 (between the 1 - 499 and 1,500 - 2,499 groups) to .6511 (between the 500 - 1,499 and 1,500 - 2,499 groups).

Table 5.28
Nutrition Information Sources by Number of Hogs Marketed in 1988:
Percentage Distribution of Responses

		Number of Hogs Marketed in 1988			
Information Source	Total	1-499	500-1499	1500-2499	2500 +
Alberta Agriculture	3.6	3.8	3.2	3.2	5.0
District Agriculturalist	2.0	5.7	2.1	0.0	1.7
Feed Company	65.3	62.3	67.4	67.4	61.7
Feeders' Day Report	1.0	1.9	2.1	0.0	0.0
Newspapers/Magazines	4.0	7.5	2.1	4.2	3.3
Nutritionalist/Feed Co.	3.3	1.9	2.1	4.2	5.0
Pork Meetings	1.0	1.9	1.0	0.0	1.7
Pork Production Handbook	1.3	1.9	1.0	1.0	1.7
Publications	1.3	0.0	2.1	2.1	0.0
Seminars	1.0	0.0	0.0	2.1	1.7
Swine Specialist	2.3	1.9	2.1	1.0	5.0
University of Alberta	5.0	3.8	3.2	4.2	10.0
Veterinarian	4.3	1.9	3.2	7.4	3.3
Western Hog Journal	4.6	5.7	8.4	3.2	0.0
Total Percent	100.0	100.2	100.0	100.0	100.1
Total Number	(303)	(53)	(95)	(95)	(60)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .638$; $R_{S_{1,3}} = .374$; $R_{S_{1,4}} = .393$; $R_{S_{2,3}} = .651$; $R_{S_{2,4}} = .400$ and $R_{S_{3,4}} = .618$.

5.3.2.28 Nutrition Information Sources by Proportion of Gross Farm Sales from Hogs in 1988

Table 5.29 indicates the percentage distribution of responses with respect to sources of nutrition information controlled by the proportion of gross farm sales derived from hogs in 1988. Thirteen information sources were listed by 303 respondents at levels of one percent or greater.

Feed Company was listed by the majority (65.7%) of the aggregate group of respondents as being their nutrition information source. Alberta Agriculture sources (Alberta Agriculture, District Agriculturalist, Pork Production Handbook and Swine Specialist) comprised 9.6% of the information sources listed by this group. Five publications and literature sources (Feeders' Day Report, Newspapers/Magazines, Pork Production Handbook, Publications and the Western Hog Journal) were listed by 12.2% of the entire group of respondents.

The six SROCCs comparing the rank order of the information sources within the four sales proportion groups were all positive in sign. These figures were evenly distributed between the values of .3245 (between 26 - 50% and 51 - 75%) and .7954 (between the two lower sales proportion groups).

Table 5.29
Nutrition Information Sources by Proportion of Gross Farm Sales from Hogs in 1988: Percentage Distribution of Responses

		Proportion of Gross Farm Sales from Hogs in 1988			
Information Source	Total	25 or Less	26-50	51-75	76-100
Alberta Agriculture	4.0	2.3	0.0	4.2	5.8
District Agriculturalist	2.0	2.3	0.0	4.2	1.4
Feed Company	65.7	65.1	71.4	66.7	63.3
Feeders' Day Report	1.0	0.0	0.0	2.8	0.7
Newspapers/Magazines	4.0	7.0	6.1	2.8	2.9
Nutritionalist/Feed Company	3.3	4.7	4.1	2.8	2.9
Pork Production Handbook	1.3	0.0	0.0	0.0	2.9
Publications	1.3	0.0	2.0	2.8	0.7
Seminars	1.0	0.0	0.0	1.4	1.4
Swine Specialist	2.3	2.3	2.0	0.0	3.6
University of Alberta	5.0	7.0	2.0	4.2	5.8
Veterinarian	4.6	4.7	8.2	2.8	4.3
Western Hog Journal	4.6	4.7	4.1	5.6	4.3
Total Percent	100.1	100.1	99.9	100.3	100.0
Total Number	(303)	(43)	(49)	(72)	(139)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .795$; $R_{S_{1,3}} = .589$; $R_{S_{1,4}} = .728$; $R_{S_{2,3}} = .325$; $R_{S_{2,4}} = .485$ and $R_{S_{3,4}} = .515$.

5.3.2.29 Record Keeping Information Sources by APPDC Producer Districts

Table 5.30 indicates the percentage distribution of responses with respect to the sources of information used for record keeping controlled by APPDC Producer District. There were thirteen information sources listed by 167 respondents at levels of one percent or greater.

24% of the total group of respondents listed Own Experience as being their source of record keeping information. In addition, District Agriculturalist (22.8%), Accountant (16.2%) and Veterinarian (8.4%) were all sources frequently listed by responding producers.

There were three information sources (Alberta Agriculture, District Agriculturalist and Swine Specialist) derived from Alberta Agriculture. These sources combined for a total of 31.2% of the responses from the aggregated group.

In the columns of Table 5.30, several results were markedly different than those found on their respective information source rows. District Agriculturalists were used by 4.7% (low) of the respondents from Districts 1 and 2. Producers from Districts 3 and 4 used Veterinarians at a level of 20.5% (high). In addition, District Agriculturalists were used by 42.9% (high) of the respondents from Districts 7 and 9 and 7.0% (low) of this group used Accountants to obtain record keeping information.

Nine of the ten SROCCs used to compare the rank ordering of the information sources within the five district groups were positive in sign. These figures ranged from .0266 (between District 5-6 and 7-9) to .6745 (between District 5-6 and 8). The SROCC comparing Districts 3-4 and 7-9 had a value of -.1829.

Table 5.30
Record Keeping Information Sources by APPDC Producer District:
Percentage Distribution of Responses

		Districts				
Information Source	Total	1 & 2	3 & 4	5 & 6	7 & 9	8
Accountant	16.2	16.3	15.4	24.0	7.0	15.2
Alberta Agriculture	4.8	2.3	2.6	4.0	7.1	8.7
Computer Program	5.4	16.3	2.6	4.0	0.0	0.0
District Agriculturalist	22.8	4.7	20.5	36.0	42.9	24.0
Family	3.0	0.0	5.1	4.0	0.0	4.3
Home Study Course	1.8	2.3	0.0	4.0	7.1	0.0
Newspapers/Magazines	2.4	0.0	10.3	4.0	0.0	0.0
Other Producers	4.2	7.0	7.7	0.0	7.1	0.0
Own Experience	24.0	32.6	12.8	12.0	7.1	37.0
Pig Champ	1.8	2.3	2.6	4.0	7.1	0.0
Swine Specialist	3.6	7.0	0.0	0.0	7.1	4.3
Veterinarian	8.4	4.7	20.5	4.0	0.0	6.5
Western Hog Journal	1.8	4.7	0.0	0.0	7.1	0.0
Total Percent	100.2	100.2	100.1	100.0	99.6	100.0
Total Number	(167)	(43)	(39)	(25)	(14)	(46)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .186$; $R_{S_{1,3}} = .131$; $R_{S_{1,4}} = .150$; $R_{S_{1,5}} = .348$; $R_{S_{1,6}} = .670$; $R_{S_{1,7}} = -.183$;

$R_{S_{2,3}} = .348$; $R_{S_{2,4}} = .027$; $R_{S_{2,5}} = .675$ and $R_{S_{4,5}} = .213$.

5.3.2.30 Record Keeping Information Sources by Years of Experience in Pork Industry

Table 5.31 indicates the percentage distribution of response to the sources of information for record keeping controlled by the number of years of experience in the pork industry. There were sixteen information sources listed by 229 respondents at levels of one percent or greater.

21% of the total number respondents indicated Own Experience as being their source of record keeping information. In addition, approximately one-fifth (20.1%) of this group used District Agriculturalists. Accountants (14.0%) and Alberta Agriculture Programs (10.0%) were also used by these producers.

Sources of information arising from Alberta Agriculture's infrastructure (District Agriculturalist, Alberta Agriculture Programs, Swine Specialist and the Pork Production Handbook) were indicated by 34.9% of the 220 respondents. Publications and other sources of literature (Home Study Courses, Newspapers/Magazines, Pork Production Handbook, and the Western Hog Journal) were used by 8.3% of this group. Computers in association with packages, were used by 6.4% of these producers.

In the columns of Table 5.31, several results were noticeably different than those observed in their respective information source rows. Other Producers and Veterinarians were used by 6.5% (high) and 14.3% (high), respectively, of the respondents with 10 years or less of experience. In addition, 11.7% (low) of this group used District Agriculturalists to acquire record keeping information. Of the producers indicating 11 - 25 years of experience, 19.8% (low) used Accountants.

The SROCCs used to compare the ordering of the information source ranks for Table 5.31 were all positive in sign. These figures ranged from a low of .3492, between 10 year of less and 26 years or greater experience, to .8044 between the two year experience groups. The SROCC comparing the two lower experience groups was .5852, indicating a moderate correlation between the groups.

Table 5.31
Record Keeping Information Sources by Years of Experience in Pork Industry:
Percentage Distribution of Responses

Information Source	Total	Years of Experience in Pork Industry		
		10 or Less	11-25	26 +
Accountant	14.0	13.0	19.8	6.6
Alberta Agriculture Program	10.0	10.4	13.2	4.9
Bank	2.2	0.0	3.3	3.3
Computer Program	5.2	2.6	5.5	8.2
District Agriculturalist	20.1	11.7	24.2	24.6
Family	1.3	1.3	1.1	1.6
Home Study Course	1.3	2.6	0.0	1.6
Newspapers/Magazines	3.5	1.3	3.3	6.6
Other Producers	3.1	6.5	1.1	1.6
Own Experience	21.0	23.4	16.5	24.6
Pig Champ	1.3	1.3	0.0	3.3
Pork Production Handbook	2.2	5.2	1.1	0.0
Short Course	3.1	5.2	1.1	3.3
Swine Specialist	2.6	1.3	3.3	3.3
Veterinarian	7.9	14.3	5.5	3.3
Western Hog Journal	1.3	0.0	1.1	3.3
Total Percent	100.1	100.1	100.1	100.1
Total Number	(229)	(77)	(91)	(61)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .585$; $R_{S_{1,3}} = .349$ and $R_{S_{2,3}} = .804$.

5.3.2.31 Record Keeping Information Sources by Number of Hogs Marketed in 1988

Table 5.32 indicates the percentage distribution of responses with respect to information sources used for record keeping controlled by the number of hogs marketed in 1988. There were sixteen information sources listed by 227 respondents at levels of one percent or greater.

District Agriculturalists (20.3%) and Own Experience (21.1%) were each listed at similar levels by the 227 respondents as being their sources of record keeping information. 13.7% of this group listed Accountant and 10.1% indicated Alberta Agriculture as being their source of information.

Information sources arising from Alberta Agriculture's infrastructure (Alberta Agriculture, District Agriculturalist, Pork Production Handbook and Swine Specialist) accounted for 35.2% of the respondents' information sources.

In the columns of Table 5.32, several results were markedly different than those found in their respective information source rows. Alberta Agriculture and Short Course were used by 28.1% (high) and 8.8% (high), respectively, of the respondents marketing 1 - 499 hogs. Conversely, Accountants and District Agriculturalists were used by 3.5% (low) and 10.5% (low), respectively, of the respondents in this group. Additionally, Computer Program was used by 13.0% (high) and Swine Specialists were indicated by 6.5% (high) of the producers marketing 2500+ hogs.

The SROCCs used to compare the rank ordering of the information sources in the four production groups were all positive. These statistics were evenly distributed, ranging from a low of .0913 (between the lowest and highest production groups) to .7015 (between the two highest production groups).

Table 5.32
Record Keeping Information Sources by Number of Hogs Marketed in 1988:
Percentage Distribution of Responses

Information Source	Total	Number of Hogs Marketed in 1988			
		1-499	500-1499	1500-2499	2500 +
Accountant	13.7	3.5	13.8	19.7	17.4
Alberta Agriculture	10.1	28.1	8.6	3.0	0.0
Bank	2.2	3.5	1.7	1.5	2.2
Computer Program	5.3	0.0	0.0	6.1	13.0
District Agriculturalist	20.3	10.5	29.3	22.7	17.4
Family	2.2	1.8	3.4	0.0	4.3
Home Study Course	1.3	0.0	1.7	3.0	0.0
Newspapers/Magazines	2.2	3.5	3.4	3.0	4.3
Other Producers	3.1	5.3	1.7	3.0	2.2
Own Experience	21.1	22.8	20.7	21.2	19.6
Pig Champ	1.3	1.8	0.0	1.5	2.2
Pork Production Handbook	2.2	5.3	3.4	0.0	0.0
Short Course	3.1	8.8	1.7	1.5	0.0
Swine Specialist	2.6	1.8	1.7	1.5	6.5
Veterinarian	8.0	3.5	5.2	12.1	10.9
Western Hog Journal	1.3	0.0	3.4	0.0	0.0
Total Percent	100.0	100.2	99.7	99.8	100.0
Total Number	(227)	(57)	(58)	(66)	(46)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}} = .577$; $R_{S_{1,3}} = .358$; $R_{S_{1,4}} = .091$; $R_{S_{2,3}} = .464$; $R_{S_{2,4}} = .382$ and $R_{S_{3,4}} = .702$.

5.3.2.32 Record Keeping Information Sources by Proportion of Gross Farm Sales from Hogs in 1988

Table 5.33 indicates the percentage distribution of responses with respect to the sources of information used for record keeping information controlled by the proportion of gross farm sales derived from hogs in 1988. There were sixteen information sources indicated by 230 respondents at a level of one percent or greater.

Own Experience (20.4%) and District Agriculturalist (20.0%) were listed at similar levels by the total group of respondents. This group also used Accountants (13.9%) and Alberta Agriculture (10.0%) to acquire record keeping information.

Record keeping information sources derived from Alberta Agriculture's infrastructure (Alberta Agriculture, District Agriculturalist, Pork Production Handbook, Swine Specialist) comprised 34.8% of the sources indicated by the entire group of respondents.

In the columns of Table 5.33, results noticeably different than those observed in their respective information source rows were found. 37.5% (high) of the respondents indicating a 26 - 50% proportion used District Agriculturalists. Also, Veterinarians were used by 12.0% (high) of the producers in the 76%+ proportion range.

The SROCCs used to compare the rank ordering of information sources between the farm sales proportion groups were all positive in sign. These statistics were evenly distributed, ranging in value from a low of .4059 (between 25% or less and 51 - 75% sales proportion) to .7440 (between the 26 - 50% and 76+% sales proportion groups).

Table 5.33
Record Keeping Information Sources by Proportion of Gross Farm Sales from Hogs in 1988:

Percentage Distribution of Responses

		Proportion of Gross Farm Sales from Hogs in 1988			
Information Source	Total	25 or Less	26-50	51-75	76-100
Accountant	13.9	10.3	15.6	9.6	16.2
Alberta Agriculture	10.0	13.8	15.6	5.8	9.4
Bank	2.2	0.0	0.0	5.8	1.7
Computer Program	5.2	6.9	3.1	3.8	6.0
District Agriculturalist	20.0	10.3	37.5	23.1	16.2
Family	2.2	3.4	0.0	1.9	2.6
Home Study Course	1.3	0.0	0.0	3.8	0.9
Newspapers/Magazines	3.5	10.3	0.0	3.8	2.6
Other Producers	3.0	0.0	0.0	3.8	4.3
Own Experience	20.4	27.6	18.8	25.0	17.1
Pig Champ	1.3	3.4	0.0	0.0	1.7
Pork Production Handbook	2.2	6.9	0.0	1.9	1.7
Short Courses	3.0	0.0	0.0	5.8	3.4
Swine Specialist	2.6	0.0	3.1	1.9	3.4
Veterinarian	7.8	3.4	3.1	3.8	12.0
Western Hog Journal	1.3	3.4	3.1	0.0	0.9
Total Percent	99.9	99.7	99.9	99.8	100.1
Total Number	(230)	(29)	(32)	(52)	(117)

Spearman Rank Order Correlation Coefficients for the above Table are:

$R_{S_{1,2}}$ = .640; $R_{S_{1,3}}$ = .406; $R_{S_{1,4}}$ = .560; $R_{S_{2,3}}$ = .517; $R_{S_{2,4}}$ = .744 and $R_{S_{3,4}}$ = .710.

5.3.3 Summary: Information Sources used for General Information

5.3.3.1 Summary of Discussion

In this portion of the study, for each of the 8 general information needs, it was found that there were some information sources which were relied upon more than others by Alberta pork producers.

It was observed that four types of information sources were identified by respondents. In some cases, a specific information source was indicated by respondents (eg. U. of A. Short Courses). In other instances, a-specific entity which provides an extension infrastructure, services and information was indicated (eg. Alberta Agriculture). There were also information sources indicated which, although being the primary responsibility of one extension entity, are contributed to by more than one extension entity (eg. Western Hog Journal). Finally, there were information sources which were poorly defined, as to their derivation, by respondents (eg. Hog Magazine and Short Courses). These three latter types of observations have, to varying degrees, complicated the identification of specific extension entities being used by respondents to satisfy general information.

Within the set of 32 crosstabulated tables, the 8 tables arising from the APPDC Producer Group crosstabulations resulted in the lowest number of information sources being listed within the respective sets of four tables. This is due to the number of respondents ("Ns") for the eight APPDC crosstabulation tables being less than in the other tables by a range of 40 to 70 respondents[26]. Table 5.1 tells us that 22.0% (63 respondents) of the Alberta pork producers who responded to this study did not answer the question about their APPDC Producer District location, thus explaining the differences in the "N" values. The information sources absent form the APPDC crosstabulation tables were from among those listed at low levels in the other three tables in the respective sets.

In general, sources of information arising from the extension infrastructures of Alberta Agriculture, the APPDC and private industry were indicated most often as being the primary sources of information for the satisfaction of the eight information needs. The specific

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26 As mentioned earlier, in order for a respondent's feedback to be entered in a crosstabulation table both variables being crosstabulated must have been answered.

information sources which were most often used for each of the eight general information needs are indicated in Table 5.34. This table is a summary of the information sources used by Alberta pork producers. The information in this table was derived from the "Total" columns of the sets of four crosstabulation tables associated with the 8 respective general information needs (Tables 5.2-5.33). The following passages will provide a summary of the results for this portion of the Information Needs of Alberta Pork Producers Study.[27]

Table 5.34

Summary of Information Sources Used for General Information Needs

	General Information Need			
	Market Information	Herd Housing Information	Business Management Information	Gov't Programs and Policies Information
Information Sources	* Radio * APPDC Codephone + Nspr / Mags + APPDC	* D. A. + Alta. Ag. + Other Prods + Nspr / Mags	* D. A. * Own Exper. + Accountants + Nspr / Mags	* D. A. * Nspr / Mags + Radio

	General Information Need			
	Breeding Stock Information	Disease Prevention and Control Information	Nutrition Information	Record Keeping Information
Information Sources	+ Other Prods + Breeders + W.H.J + Nspr / Mags	* Veterinarian	* Feed Co. / Nutritionalist	* Own Exp. * D. A. + Accountant + Alta Ag. Prog + Veterinarian

* Indicates Primary Source(s)
+ Indicates Other Important Source(s)

27 In general, the information sources used by Hutterite hog managers for general information needs were similar to those of the producers marketing 2500+ hogs. The main difference observed was that Hutterite hog managers have a strong information networking system with other hog managers.

5.3.3.1.1 Market Information Sources

The primary sources of market information, listed in decreasing order of use, as indicated by respondents were Radio, the APPDC Codephone, the APPDC and Newspapers/Magazines. Radio and APPDC sources jointly comprised about 90% of the market information sources indicated by producers.

In the following text, results, relating to sources used to acquire market information, that were markedly different than the rest found in the respective information source rows will be outlined.

In Table 5.2, 26.6% (high) of the respondents from District 8 indicated using the APPDC as the information source for market information, whereas 20.3% (low) indicated the Codephone. Of the respondents from Districts 7 and 9, 29.6% (low) indicated the use of Radio and 14.0% (high) of the respondents from Districts 3 and 4 used Television.

In Table 5.3, 3.6% (low) of the respondents with 11 - 25 years of experience used CFCW (radio station) and the Codephone was used by 14.4% (low) of this group. In addition, 9.5% (low) of the producers with 10 years or less of experience used Newspapers / Magazines.

In Table 5.4, APPDC was indicated by 7.3% (low) of the respondents producing 1 - 499 hogs in 1988. Of this group, 16.4% (high) indicated they used CFCW (radio station) for market information. Of the respondents in the 2500+ group, 43.1% (high) used the Codephone and 10.3% (high) used Newspapers / Magazines.

In Table 5.5, 4.7% (low) of the producers indicating a 25% or less proportion used the APPDC. Conversely, 31.3% (high) of the producers from the 26 - 50% proportion group used this source. CFCW (radio station) was used by 23.3% (high) of the 25% or less proportion group. In addition, 34.9% (high) of the 76%+ proportion respondents used the Codephone.

5.3.3.1.2 Herd Housing Information Sources

In order of decreasing use, District Agriculturalists, Alberta Agriculture, Other Producers and Newspapers/ Magazines were listed by Alberta pork producers as being their sources of herd housing information. Approximately 45% of respondents listed herd housing information sources arising from Alberta Agriculture's infrastructure.

In the following text, results, relating to sources used to acquire herd housing information, that were markedly different than the rest found in the respective information source rows will be outlined.

In Table 5.6, 7.0% (high) of the respondents in Districts 3 and 4 used Agricultural Engineers and 8.8% (high) used the Pork Congress for acquiring herd housing information. Seminars were used by 5.9% (high) of the respondents in Districts 1 and 2 and 15.8% (high) of the respondents from Districts 3 and 4 used the Western Hog Journal.

In Table 5.7, Alberta Agriculture was used by 15.1% (high) of the respondents with 10 years or less of experience. In addition, the Pork Production Handbook was used by 7.0% (high) of the respondents in this group. Newspaper / Magazine were used by 15.8% (high) of the producers with 26+ years of experience. 15.4% (high) of the respondents with 11 - 25 years of experience used Other Producers and 6.0% (high) used the Pork Congress for herd housing information.

In Table 5.8, Agribusiness Suppliers were used by 9.4% (high) of the respondents marketing 500 - 1499 hogs. 2.2% (low) of the producers in the 1 - 499 category used Alberta Agriculture, 34.8% (high) used District Agriculturalists and 10.9% (high) of this group used a Hog Magazine. Newspapers / Magazines were used by 10.2% (high) of the producers marketing 1500 - 2499 hogs. In addition, 5.1% (high) of the 2500+ catogory respondents used Seminars to acquire herd housing information.

In Table 5.9, Agricultural Engineers were used by 7.7% (high) of respondents indicating the 25% or less proportion. In addition, 5.1% (high) and 10.3% (high) of this group used the Country Guide and Hog Magazines, respectively. District Agriculturalists were used by 16.7% (low) of the producers in the 76%+ proportion group and Newspaper /Magazines were used by 12.3% (high) of the producers indicating the 51 - 75% range. In addition, 15.4% (high) of the respondents in the 26 - 50 % range used Other Producers for herd housing information.

5.3.3.1.3 Business Management Information Sources

The primary sources of business management information, listed in decreasing order of use, as indicated by respondents were District Agriculturalists, Own Experience, Accountants,

Newspapers/Magazines, Alberta Agriculture and Banks. District Agriculturalists were indicated by one-fourth of the respondents in this study as being their sources of business management information.

In the following text, results, relating to sources used to acquire business management information, that were markedly different than the rest found in the respective information source rows will be outlined.

In Table 5.10, of the respondents indicating Districts 7 and 9, 0.0% (low) used Accountants and Own Experience, whereas 42.9% (high) and 9.5% (high) used Newspapers / Magazines and Swine Specialist for business management information, respectively. Of the respondents from District 8, 0.0% (low) used the Western Hog Journal.

In Table 5.11, of the respondents indicating 10 years or less of experience, 4.7% (high) used the Pork Production Handbook for business management information. Alberta Agriculture was used by 5.8% (low) of the respondents with between 11 - 25 years of experience. Additionally, Radio and Seminars were used by 3.5% (high) and 5.8% (high), respectively, of this group.

In Table 5.12, 25.8% (high) and 9.7% (high) of the respondents marketing 1 - 499 hogs used Own Experience and the Western Hog Journal, respectively. Alberta Agriculture and Radio were used by 13.2% (high) and 4.4% (high), respectively, of the respondents marketing 500 - 1499 hogs. 17.5% (high) of the producers marketing between 1500 and 2499 hogs used Banks for business management information. Finally, Private Consultants and Seminars were used by 7.5% (high) and 12.5% (high), respectively, of the respondents in the 2500+ category.

In Table 5.13, 16.0% (high) and 12.0% (high) of the respondents indicating a 25% or less proportion used Accountants and Alberta Agriculture, respectively. 8.0% (high) of this group each used the Pork Production Handbook and the Western Hog Journal and 0.0% (low) used banks for business management information. Of the respondents indicating a 76%+ proportion, 10.7% (high) and 3.9% (high) used Banks and Private Consultants, respectively.

5.3.3.1.4 Government Program and Policy Information Sources

In order of decreasing use, District Agriculturalists, Newspapers/Magazines and Radio were listed by Alberta pork producers as being their source of government program and policy information. The first two information sources were indicated by approximately one-half and one-fifth of respondents, respectively.

In the following text, results, relating to sources used to acquire governmant policy and program information, that were markedly different than the rest found in the respective information source rows will be outlined.

In Table 5.14, District Agriculturalists were used by 77.8% (high) of the respondents from Districts 7 and 9.

In Table 5.15, of the respondents indicating 11 - 25 years of experience, 3.6% (high) used the University of Alberta for acquiring government program and policy information. 0.0% (low) of producers with 26+ years of experience used Other Producers.

5.3.3.1.5 Breeding Stock Information Sources

There were four primary breeding stock information sources listed at similar levels by Alberta pork producers. These sources, listed in declining order of use, were Other Producers, Breeders, the Western Hog Journal and Newspapers/Magazines. The indicated percentage use of these breeding stock information sources ranged from approximately 17% to about 11%.

In the following text, results, relating to sources used to acquire breeding stock information, that were markedly different than the rest found in the respective information source rows will be outlined.

In Table 5.18, 15.8% (high) of the respondents from Districts 1 and 2 used an A. I. Unit. Own Experience and Pig Improvement Canada were used by 10.5% (high) and 21.1% (high), respectively, of the producers from districts 5 and 6. In addition, Newspapers / Magazines were used by 0.0% (low) of this group. Respondents from Districts 7 and 9 used District Agriculturalists and the Western Hog Journal at levels of 23.1% (high) and 30.8% (high), respectively. Alberta Swine Breeders Association was used by 0.0% (low) of the respondents in District 8 and Breeders were used by 33.3% (high) of this group for acquiring breeding stock information.

In Table 5.19, 7.2% (high) of the respondents with 11 - 25 years of experience used Pig Improvment Canada. Also, A. I. Unit was used by 0.0% (low) of the producers indicating 26+ years of experience and the Western Hog Journal was used by 20.0% (high) of this group for acquiring breeding stock information.

In Table 5.20, Agribusiness Suppliers were used by 2.9% (low) of the respondents marketing 1 - 499 hogs. Veterinarians were used at increasing levels (2.9% - 10.3%) by respondents as the indicated number of hogs marketed increased. Newspapers / Magazines were used by 20.7% (high) of the respondents marketing 2500+ hogs for obtaining breeding stock information. In addition, 13.8% (high) and 10.3% (high) of the producers in this group used A. I. Unit and Alberta Swine Breeders Association, respectively.

In Table 5.21, Pig Improvement Canada was used by 0.0% (low) of the respondents indicating a 25% or less proportion. In addition, District Agriculturalists and Other Producers were used by 21.4% (high) and 7.1% (low), respectively, of the respondents indicating the 51 to 75% proportion.

5.3.3.1.6 Disease Prevention and Control Information Sources

The primary source of disease prevention and control information identified by Alberta pork producers was Veterinarians. Almost 60% of the respondents in this study indicated this source.

In the columns of Tables 5.22 through 5.25, the results observed in the respective information source rows were similar in value.

5.3.3.1.7 Nutrition Information Sources

Feed Companies were listed as the source of nutrition information by the majority of Alberta pork producers. The combined percentage totals for producer use of Feed companies and Nutritionalist/Feed Company comprised between 65 and 70% of the total nutrition information sources indicated.

In the columns of Tables 5.26 through 5.29, the results observed in the respective information source rows were similar in value.

5.3.3.1.8 Record Keeping Information Sources

The primary sources of record keeping information, listed in decreasing order of use, as indicated by respondents in this study were Own Experience, District Agriculturalists, Accountants, Alberta Agriculture Program and Veterinarians. The first two sources were each listed by over one-fifth of the respondents.

In the following text, results, relating to sources used to acquire record keeping information, that were markedly different from the rest found in the respective information source rows will be outlined.

In Table 5.30, District Agriculturalists were used by 4.7% (low) of the respondents from Districts 1 and 2. Producers from Districts 3 and 4 used Veterinarians at a level of 20.5% (high). In addition, District Agriculturalists were used by 42.9% (high) of the respondents from Districts 7 and 9 and 7.0% (low) of this group used Accountants to obtain record keeping information.

In Table 5.31, Other Producers and Veterinarians were used by 6.5% (high) and 14.3% (high), respectively, of the respondents with 10 years or less of experience. In addition, 11.7% (low) of this group used District Agriculturalists to acquire record keeping information. Of the producers indicating 11 - 25 years of experience, 19.8% (low) used Accountants.

In Table 5.32, Alberta Agriculture and Short Course were used by 28.1% (high) and 8.8% (high), respectively, of the respondents marketing 1 - 499 hogs. Conversely, Accountants and District Agriculturalists were used by 3.5% (low) and 10.5% (low), respectively, of the respondents in this group. Additionally, Computer Program was used by 13.0% (high) and Swine Specialists were indicated by 6.5% (high) of the producers marketing 2500+ hogs.

In Table 5.33, 37.5% (high) of the respondents indicating a 26 - 50% proportion used District Agriculturalists. Also, Veterinarians were used by 12.0% (high) of the producers in the 76%+ proportion range.

5.3.3.2 Summary of Spearman Rank Order Correlation Coefficient Analysis

In the SROCC analyses, the derived statistics comment on the correlation between the rank orderings of the information sources listed in two columns being compared. The SROCC statistics comparing the columns contained within Tables 5.2-5.33 were predominantly positive in sign. Of the 200 statistics calculated, only 8 were negative in value. All 8 of these negative statistics arose from comparing columns within the APPDC Producer District crosstabulation tables. These 8 negative statistics (from Tables 5.10, 5.18, 5.26 and 5.30) comprised a one-tenth

proportion of the 80 SROCCs calculated for the APPDC Producer District crosstabulation tables. The remaining four APPDC Producer District crosstabulation tables also had the lowest, non-negative, SROCC ranges in their sets.

Another recognizable observation arose from the comparison of the lowest (1-499 head) and highest (2500+ head) number of head marketed in 1988 groups. In Tables 5.8, 5.12, 5.20, 5.24 and 5.32, the SROCC associated with the comparison of these two columns was the lowest of the 8 calculated for the respective tables. In these cases, there was a value difference of .22 to .78 between the lowest and second lowest SROCCs.

With the exception of the cases previously mentioned, the remaining SROCCs, discussed in Chapter 5.3.2.1-5.3.2.32, comparing the columns in the various crosstabulation tables generally ranged in value from the high-.30s to low-.90s. Additionally, no further patterns were apparent.

5.4 Use and Satisfaction with Information Sources in Alberta

5.4.1 Methodology

The four tables which will be discussed in this section (Tables 5.35 - 5.38) indicate the percentage distribution of information source utilization and average level of satisfaction ("Av.*") with these sources. These tables are controlled by APPDC Producer District, years of experience in the pork industry, number of hogs marketed in 1988 and the proportion of gross farm income derived from hog sales, respectively.

The ordering and specification of the 30 information sources listed in each of the tables are based on Section 3 of this study's telephone interview form (Appendix 2). These sources are listed in the same (alphabetical) order to facilitate continuity between these tables. In Appendix 4, these tables are each presented in terms of descending percentage use by Alberta pork producers (Tables 1 - 4)[28] and descending average satisfaction (Tables 5 - 8).

The information sources listed in the tables arise from the four institutions that provide extension and information services to Alberta pork producers. The types of information sources identified can be classified into three categories. These being: 1) institutions providing the infrastructure for extension and information (eg: Universities) ; 2) individuals providing information in conjunction with an institution (eg: District Agriculturalists) and 3) events or media derived from an entity which provides extension and information to Alberta pork producers (eg: Pork Congress and Western Hog Journal).

When the data from the mailed questionnaire form (Section B: Part 1) and the telephone interview form (Part 3) were merged, the results from these instruments were weighted accordingly. In addition, the Degree of Use portion in Section B: Part 1 was recoded. A producer's response of "1" indicated "No Use" for a given information source and "2, 3, 4 and 5" indicated "Source was Used".

The rating scales for the Level of Satisfaction sections in both instruments were the same (Likert Scale). The average level of satisfaction for the information sources listed in Tables 5.35 - 5.38 are only applicable to those respondents who indicated that their use of a given information

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28 Tables 1 and 5 in Appendix 4 are derived from Table 5.35, Tables 2 and 6 from Table 5.36, etc.

source as well as the applicable demographic attribute variable. The average level of satisfaction for an information source is based on a graduated rating scale of 1 to 5. A producer evaluation of 1 indicated "not satisfied" and an indication of 5 indicated "very satisfied" (Appendix 2: Section 3).

5.4.2 Description of Results

5.4.2.1 Percentage Use of Information Sources by Alberta Pork Producers

The ranking of the 30 information sources by the Alberta pork producers, with respect to the percentage of producers using these sources, was similar in the "Total" columns of the four tables under discussion (Appendix 4: Tables 1-4). In general, ranking of the ten most-used information sources, in descending order, were: 1) the Western Hog Journal; 2) Other Producers; 3) Feed Suppliers; 4) Other Farm Magazines; 5) District Agriculturalists, 6) Veterinarians; 7) Radio; 8) Alberta Agriculture; 9) Newspapers and 10) Agribusiness Suppliers. The degree of producer use within these ten sources ranged from mid-90% to low-70% in value.

Information sources arising directly from Universities and colleges were among those which were used the least by Alberta pork producers. Additionally, information sources derived from the APPDC District Meetings, Codephone, Head Office and Sales Office tended to be ranked in the middle to upper one-third of the ranked list.

The rankings for Alberta pork producers use of the 30 information sources within the various categories contained in the Tables 5.35 - 5.38 were quite consistent. Information sources listed in the top ten in a "Total" column were usually ranked in the top ten of that table's remaining columns. This observation is also rather consistent for the rankings of the information sources in the middle and lower thirds of the total columns.

5.4.2.2 Average Satisfaction with Information Sources Available to Alberta Pork Producers

The extreme range of average satisfaction values, associated with information sources available to Alberta pork producers, in the four tables ranged from 4.5 (Trucker or Assembler in Table 5.36) to 2.23 (Television in Table 5.36). However, the average satisfaction levels associated with the information sources in these tables generally ranged from 4.0 to 2.5 in value.

Of the ten most frequently used information sources listed in the previous section, the majority of these were also listed among the high ranking information sources based on average satisfaction (see Appendix 4: Tables 5-8). In particular, the Western Hog Journal, Other Producers, Other Farm Magazines, District Agriculturalists and Veterinarians are information sources that follow this observation. The average levels of satisfaction associated with the information sources of Radio and Newspaper resulted in these sources to be generally in the lower one-third of the tables. Conversely, the information sources of Trucker or Assembler, while consistently ranked in the lower one-third in the percentage use tables by telephone interview respondents, were generally ranked within the top five information in the ranked average satisfaction tables.

Table 5.35
Information Sources Utilized by Alberta Pork Producers and Level of Satisfaction Associated with Information by Region. Percentage Distribution of Responses

	TOTAL		REGIONS													
			1 & 2			3 & 4			5 & 6			8			7 & 9		
Information Source	N	% Yes	% Yes	% No	Av.*	% Yes	% No	Av.*	% Yes	% No	Av.*	% Yes	% No	Av.*	% Yes	% No	Av.*
Agribusiness Suppliers	(213)	77.0 (164)	86.0 (43)	14.0 (7)	3.14	87.2 (41)	12.8 (6)	3.0	69.4 (25)	30.6 (11)	3.5	67.2 (39)	32.8 (19)	3.3	72.7 (16)	27.3 (6)	3.3
Agriculture Canada	(208)	56.3 (117)	59.2 (29)	40.8 (20)	2.76	50.0 (22)	50.0 (22)	2.59	61.8 (21)	38.2 (13)	3.09	50.0 (29)	50.0 (29)	3.03	69.6 (16)	30.4 (7)	3.06
Alberta Agriculture	(218)	86.7 (189)	92.3 (48)	7.7 (4)	3.21	89.8 (44)	10.2 (5)	3.41	77.8 (28)	22.2 (8)	3.46	84.5 (49)	15.5 (9)	3.92	87.0 (20)	13.0 (3)	3.55
Pork Production Handbook	(210)	67.1 (141)	70.0 (35)	30.0 (15)	3.40	71.7 (33)	28.3 (13)	3.32	64.7 (22)	35.3 (12)	3.36	58.6 (34)	41.1 (24)	3.26	77.3 (17)	22.7 (5)	3.61
Bank	(212)	52.8 (112)	55.1 (27)	44.9 (22)	2.75	59.6 (28)	40.4 (19)	2.83	31.4 (11)	68.6 (24)	3.00	60.3 (35)	39.7 (23)	2.99	47.8 (11)	52.2 (12)	2.88
APPDC Codephone	(213)	72.3 (154)	76.0 (38)	24.0 (12)	3.52	66.7 (32)	33.3 (16)	3.97	58.8 (20)	41.2 (14)	3.80	81.0 (47)	19.0 (11)	3.27	73.9 (17)	26.1 (6)	3.61
Agricultural Colleges	(206)	39.3 (81)	54.2 (26)	45.8 (22)	3.12	41.3 (19)	58.7 (27)	3.26	31.3 (10)	68.8 (22)	3.10	29.8 (17)	70.2 (40)	3.12	39.1 (9)	60.9 (14)	3.39
County Fieldman	(208)	46.6 (97)	47.9 (23)	52.1 (25)	2.77	37.0 (17)	63.0 (29)	3.23	36.4 (12)	63.6 (21)	3.08	58.6 (34)	41.4 (24)	3.44	47.8 (11)	52.2 (12)	3.09
District Agriculturalist	(214)	88.8 (190)	88.0 (44)	12.0 (6)	3.31	87.2 (41)	12.8 (6)	3.6	86.1 (31)	13.9 (5)	3.74	91.4 (53)	8.6 (5)	4.09	91.3 (21)	8.7 (2)	3.64
APPDC District Meetings	(212)	76.4 (162)	80.0 (40)	20.0 (10)	2.8	87.2 (41)	12.7 (6)	2.7	70.6 (24)	29.4 (10)	3.5	67.2 (39)	32.8 (19)	2.62	78.3 (18)	21.7 (5)	3.5
Elevator Agent	(206)	49.5 (102)	46.8 (22)	53.2 (25)	3.05	52.3 (23)	47.7 (21)	3.33	38.2 (13)	61.8 (21)	3.23	46.6 (27)	53.4 (31)	3.44	73.9 (17)	26.1 (6)	3.12
Western Hog Journal	(219)	96.8 (212)	98.1 (51)	1.9 (1)	3.63	100.0 (48)	0.0 (0)	3.58	89.2 (33)	10.8 (4)	3.87	96.6 (56)	3.4 (2)	3.59	100.0 (24)	0.0 (0)	3.33
Other Farm Magazines	(221)	92.8 (205)	96.2 (51)	3.8 (2)	3.51	98.0 (48)	2.0 (1)	3.35	89.2 (33)	10.8 (4)	3.42	86.2 (50)	13.8 (8)	3.62	95.8 (23)	4.2 (1)	3.27
Feed Suppliers	(216)	92.6 (200)	92.2 (47)	7.8 (4)	3.32	97.9 (46)	2.1 (1)	3.22	88.9 (32)	11.1 (4)	3.72	93.1 (54)	6.9 (4)	3.94	87.5 (21)	12.5 (3)	3.54
Futures Market	(208)	39.4 (82)	41.7 (20)	58.3 (28)	2.99	51.1 (24)	48.9 (23)	2.88	35.3 (12)	64.7 (22)	2.92	29.8 (17)	70.2 (40)	2.94	40.9 (9)	59.1 (13)	2.86

Continued

Table 5.35 Continued

Information Source	TOTAL		REGIONS															
			1 & 2			3 & 4			5 & 6			8			7 & 9			
	N	% Yes	% Yes	% No	Av.*	% Yes	% No	Av.*	% Yes	% No	Av.*	% Yes	% No	Av.*	% Yes	% No	Av.*	
Newspapers	(214)	86.0 (184)	84.3 (43)	15.7 (8)	2.84	93.3 (42)	6.7 (3)	2.88	72.2 (26)	27.8 (10)	3.12	91.4 (53)	8.6 (5)	2.85	83.3 (20)	16.7 (4)	3.11	
Other Producers	(221)	95.5 (211)	98.1 (52)	1.9 (1)	3.46	93.9 (46)	6.1 (3)	3.73	91.9 (34)	8.1 (3)	3.97	96.6 (56)	3.4 (2)	3.57	95.8 (23)	4.2 (1)	3.63	
Pork Congress	(214)	63.6 (136)	74.5 (38)	25.5 (13)	3.49	85.7 (42)	10.6 (5)	3.45	64.7 (22)	35.3 (12)	3.55	39.7 (23)	60.3 (35)	3.17	45.8 (11)	54.2 (13)	3.00	
Short Courses	(212)	58.0 (123)	60.0 (30)	40.0 (20)	3.34	66.0 (31)	34.0 (16)	3.26	50.0 (17)	50.0 (17)	3.46	51.7 (30)	48.3 (28)	3.53	65.2 (15)	34.8 (8)	3.4	
Radio	(235)	88.1 (207)	84.3 (43)	15.7 (8)	2.83	78.0 (44)	10.2 (5)	3.00	88.9 (48)	11.1 (6)	3.48	89.7 (52)	10.3 (6)	3.15	87.0 (20)	13.0 (3)	3.15	
Swine Specialist	(213)	67.6 (144)	70.6 (36)	29.4 (15)	3.47	68.1 (32)	31.9 (15)	3.34	57.1 (20)	42.9 (15)	3.60	69.0 (40)	31.0 (18)	3.67	72.7 (16)	27.3 (6)	3.19	
Television	(215)	45.1 (97)	44.0 (22)	56.0 (28)	2.63	63.3 (31)	36.7 (18)	2.61	37.1 (13)	62.9 (22)	2.61	31.0 (18)	69.0 (40)	2.28	56.5 (13)	43.5 (10)	2.23	
Universities	(208)	48.1 (100)	35.4 (17)	64.6 (31)	2.94	60.0 (27)	40.0 (18)	3.18	50.0 (17)	50.0 (17)	2.99	46.6 (27)	53.4 (31)	2.96	52.1 (12)	47.8 (11)	3.1	
U of A's Ag/For. Bulletin	(206)	33.0 (68)	38.3 (18)	61.7 (29)	2.5	46.7 (21)	53.3 (24)	2.86	23.5 (8)	76.5 (26)	2.87	19.0 (11)	81.0 (47)	2.34	45.5 (10)	54.5 (12)	2.7	
U of A's Feeders' Day Report	(205)	31.2 (64)	31.3 (15)	68.8 (33)	2.45	42.2 (19)	57.8 (26)	2.66	26.5 (9)	73.5 (25)	3.11	24.6 (14)	75.4 (43)	2.4	33.3 (7)	66.7 (14)	2.9	
U of A Short Courses	(199)	31.7 (63)	30.0 (15)	70.0 (35)	2.79	51.1 (23)	48.9 (22)	3.13	32.4 (11)	67.6 (23)	3.0	27.6 (16)	72.4 (42)	2.48	36.4 (8)	63.6 (14)	3.00	
Veterinarian	(227)	83.7 (190)	88.2 (45)	11.8 (6)	3.61	91.8 (45)	8.2 (4)	3.81	63.0 (29)	37.0 (17)	3.45	93.1 (54)	6.9 (4)	4.00	73.9 (17)	26.1 (6)	3.7	
APPDC Head Office**	(97)	64.9 (63)	43.8 (7)	56.3 (9)	3.57	90.0 (9)	10.0 (1)	3.13	46.7 (7)	53.3 (8)	3.29	72.7 (32)	27.3 (12)	2.42	66.7 (8)	33.3 (4)	3.0	
APPDC Sales Office**	(106)	50.9 (54)	18.8 (3)	81.3 (13)	3.67	60.0 (6)	40.0 (4)	3.4	40.0 (10)	60.0 (15)	3.10	67.4 (29)	32.6 (14)	2.86	50.0 (6)	50.0 (6)	3.33	
Trucker or Assembler**	(97)	49.5 (48)	37.5 (6)	62.5 (10)	3.5	20.0 (2)	80.0 (8)	4.5	13.3 (2)	86.7 (13)	4.0	75.0 (33)	25.0 (11)	3.91	41.7 (5)	58.3 (7)	4.0	

* Average Satisfaction.
** Only asked in telephone interviews.

Table 5.36

Information Sources Utilized by Alberta Pork Producers and Level of Satisfaction Associated with Information by Years of Experience in the Pork Industry: Percentage Distribution of Responses

	TOTAL		Years of Experience in the Pork Industry								
			10 or Less			11 - 25			26 +		
Information Source	N	% Yes	% Yes	% No	Av.*	% Yes	% No	Av.*	% Yes	% No	Av.*
Agribusiness Suppliers	(268)	71.6 (192)	76.3 (61)	23.8 (19)	3.15	68.1 (77)	31.9 (36)	3.27	72.0 (54)	28.0 (21)	3.14
Agriculture Canada	(264)	53.4 (141)	43.6 (34)	56.4 (44)	2.98	59.6 (68)	40.4 (46)	2.99	54.2 (39)	45.8 (33)	2.99
Alberta Agriculture	(275)	84.0 (231)	85.4 (70)	14.6 (12)	3.70	84.5 (98)	15.5 (18)	3.49	81.8 (63)	18.2 (14)	3.44
Pork Production Handbook	(268)	64.2 (172)	78.8 (63)	21.3 (17)	3.58	62.3 (71)	37.7 (43)	3.24	51.4 (38)	48.6 (36)	3.25
Bank	(268)	50.4 (135)	56.1 (46)	43.9 (36)	2.71	55.3 (63)	44.7 (51)	2.85	36.1 (26)	63.9 (46)	2.59
APPDC Codephone	(269)	66.5 (179)	74.1 (60)	25.9 (21)	3.71	67.0 (77)	33.0 (38)	3.62	57.5 (42)	42.5 (31)	3.56
Agricultural Colleges	(260)	34.6 (90)	41.0 (32)	59.0 (46)	3.34	33.3 (37)	66.7 (74)	3.03	29.6 (21)	70.4 (50)	3.14
County Fieldman	(272)	47.7 (129)	55.2 (48)	44.8 (39)	3.23	45.1 (51)	54.9 (62)	3.14	41.7 (30)	58.3 (42)	3.14
District Agriculturalist	(273)	88.3 (241)	91.5 (75)	8.5 (7)	3.64	88.7 (102)	11.3 (13)	3.70	84.2 (64)	15.8 (12)	3.64
APPDC District Meetings	(269)	66.5 (179)	63.8 (51)	36.3 (29)	2.68	71.9 (82)	28.1 (32)	2.94	61.3 (46)	38.7 (29)	3.01
Elevator Agent	(262)	46.2 (121)	40.5 (32)	59.5 (47)	3.34	53.2 (59)	46.8 (52)	3.22	41.7 (30)	58.3 (42)	3.33
Western Hog Journal	(278)	95.3 (265)	94.0 (79)	6.0 (5)	3.72	97.4 (113)	2.6 (3)	3.54	93.6 (73)	6.4 (5)	3.63
Other Farm Magazines	(280)	89.6 (251)	89.3 (75)	10.7 (9)	3.46	88.1 (104)	11.9 (14)	3.47	92.3 (72)	7.7 (6)	3.49
Feed Suppliers	(274)	90.5 (248)	92.7 (76)	7.3 (6)	3.30	91.4 (106)	8.6 (10)	3.59	86.8 (66)	13.2 (10)	3.75
Futures Market	(264)	35.2 (93)	35.0 (28)	65.0 (52)	2.86	38.1 (43)	61.9 (70)	2.76	31.0 (22)	69.0 (49)	3.03

Continued

Table 5.36 Continued

Information Source	TOTAL N	TOTAL % Yes	Years of Experience in the Pork Industry: 25% or Less % Yes	25% or Less % No	25% or Less Av.*	26 - 50% % Yes	26 - 50% % No	26 - 50% Av.*	51 - 75% % Yes	51 - 75% % No	51 - 75% Av.*
Newspapers	(272)	83.1 (226)	78.8 (63)	21.3 (17)	2.81	86.2 (100)	13.8 (16)	2.99	82.9 (63)	17.1 (13)	3.00
Other Producers	(279)	93.9 (262)	95.2 (79)	4.8 (4)	3.61	94.9 (112)	5.1 (6)	3.68	91.0 (71)	9.0 (7)	3.63
Pork Congress	(273)	57.5 (157)	58.0 (47)	42.0 (34)	3.47	64.1 (75)	35.9 (42)	3.33	46.7 (35)	53.3 (40)	3.26
Short Courses	(268)	52.6 (141)	56.8 (46)	43.2 (35)	3.48	54.8 (63)	45.2 (52)	3.39	44.4 (32)	55.6 (40)	3.41
Radio	(253)	85.8 (217)	86.6 (71)	13.4 (11)	3.21	82.5 (80)	17.5 (17)	3.25	89.2 (66)	10.8 (8)	3.13
Swine Specialist	(270)	63.7 (172)	67.9 (55)	32.1 (26)	3.69	62.6 (72)	37.4 (43)	3.38	60.8 (45)	39.2 (29)	3.31
Television	(260)	45.8 (119)	54.2 (39)	45.8 (33)	2.54	49.1 (56)	50.9 (58)	2.55	32.4 (24)	67.6 (50)	2.77
Universities	(253)	43.9 (111)	42.6 (29)	57.4 (39)	3.31	47.8 (54)	52.2 (59)	2.96	38.9 (28)	61.1 (44)	3.27
U of A's Ag/For. Bulletin	(262)	28.6 (75)	25.6 (20)	74.4 (58)	2.90	33.0 (37)	67.0 (75)	2.61	25.0 (18)	75.0 (54)	2.78
U of A's Feeders' Day Report	(261)	27.6 (72)	24.1 (19)	75.9 (60)	2.53	29.7 (33)	70.3 (78)	2.52	28.2 (20)	71.8 (51)	3.1
U of A Short Courses	(265)	31.3 (83)	27.5 (22)	72.5 (58)	2.94	38.3 (44)	61.7 (71)	2.91	24.3 (17)	75.7 (53)	2.91
Veterinarian	(274)	88.0 (241)	90.2 (74)	9.8 (8)	3.67	88.8 (103)	11.2 (13)	3.63	84.2 (64)	15.8 (12)	3.76
APPDC Head Office**	(146)	56.2 (82)	61.7 (29)	38.3 (18)	2.97	54.4 (31)	45.6 (26)	2.81	52.4 (22)	47.6 (20)	2.88
APPDC Sales Office**	(145)	49.7 (72)	44.7 (21)	55.3 (26)	2.91	52.6 (30)	47.4 (27)	3.10	51.2 (21)	48.8 (20)	3.10
Trucker or Assembler**	(146)	42.5 (62)	48.9 (23)	51.1 (24)	3.39	36.8 (21)	63.2 (36)	3.81	42.9 (18)	57.1 (24)	4.06

* Average Satisfaction.
** Only asked in telephone interviews.

Table 5.37

Information Sources Utilized by Alberta Pork Producers and Level of Satisfaction Associated with Information by Number of Hogs Marketed in 1988. Percentage Distribution of Responses

	TOTAL		Number of Hogs Marketed in 1988											
			1 - 499			500 - 1499			1500 - 2499			2500 +		
Information Source	N	% Yes	% Yes	% No	Av.*	% Yes	% No	Av.*	% Yes	% No	Av.*	% Yes	% No	Av.*
Agribusiness Suppliers	(266)	72.2 (192)	47.2 (25)	52.8 (28)	3.17	73.8 (62)	26.2 (22)	3.26	75.6 (59)	24.4 (19)	3.23	90.2 (46)	9.8 (5)	3.02
Agriculture Canada	(263)	53.2 (140)	32.7 (17)	67.3 (35)	3.12	52.4 (44)	48.2 (41)	3.25	59.2 (45)	40.8 (31)	3.0	68.0 (34)	32.0 (16)	2.53
Alberta Agriculture	(272)	84.2 (229)	63.6 (35)	36.4 (20)	3.43	90.6 (77)	9.4 (8)	3.64	86.4 (70)	13.6 (11)	3.7	92.2 (47)	7.8 (4)	3.71
Pork Production Handbook	(266)	64.3 (171)	58.9 (33)	41.1 (23)	3.49	61.0 (50)	39.0 (32)	3.3	63.6 (49)	36.4 (28)	3.37	76.5 (39)	23.5 (12)	3.31
Bank	(266)	50.4 (134)	28.3 (15)	71.7 (38)	2.8	41.7 (35)	58.3 (49)	2.78	63.8 (51)	36.3 (29)	2.94	67.3 (33)	32.7 (16)	2.96
APPDC Codephone	(267)	66.7 (178)	53.7 (29)	46.3 (25)	3.39	62.4 (53)	37.6 (32)	3.7	67.1 (53)	32.9 (26)	3.68	87.8 (43)	12.2 (6)	3.61
Agricultural Colleges	(259)	35.1 (91)	20.0 (10)	80.0 (40)	3.03	46.3 (25)	79.7 (59)	3.32	37.7 (29)	62.3 (48)	2.99	56.3 (27)	43.8 (21)	3.11
County Fieldman	(263)	42.6 (112)	30.2 (16)	69.8 (37)	3.42	42.4 (36)	57.0 (49)	3.25	51.9 (40)	48.1 (37)	3.07	41.7 (20)	58.3 (28)	3.1
District Agriculturalist	(271)	88.2 (239)	82.1 (46)	17.9 (10)	3.58	89.7 (78)	10.3 (9)	3.62	92.4 (73)	7.6 (6)	3.95	85.7 (42)	14.3 (7)	3.77
APPDC District Meetings	(267)	66.3 (177)	36.4 (20)	63.6 (35)	2.77	61.2 (52)	38.8 (33)	2.94	75.3 (58)	24.7 (19)	2.93	94.0 (47)	6.0 (3)	2.83
Elevator Agent	(261)	46.4 (121)	30.2 (16)	69.8 (37)	3.05	54.8 (46)	45.2 (38)	3.48	46.1 (35)	53.9 (41)	3.19	50.0 (24)	50.0 (24)	3.17
Western Hog Journal	(275)	95.3 (262)	87.5 (49)	12.5 (7)	3.49	97.7 (85)	2.3 (2)	3.71	95.1 (77)	4.9 (4)	3.59	100.0 (51)	0.0 (0)	3.61
Other Farm Magazines	(278)	89.9 (250)	76.8 (43)	23.2 (13)	3.37	92.0 (81)	8.0 (7)	3.60	94.0 (78)	6.0 (5)	3.41	94.1 (48)	5.9 (3)	3.42
Feed Suppliers	(272)	90.8 (247)	74.5 (41)	25.5 (14)	3.26	91.9 (79)	8.1 (7)	3.69	98.8 (79)	1.3 (1)	3.55	94.1 (48)	5.9 (3)	3.59
Futures Market	(263)	35.7 (94)	30.2 (16)	69.8 (37)	3.14	26.2 (22)	73.8 (62)	2.91	39.7 (31)	60.3 (47)	2.89	52.1 (25)	47.9 (23)	3.16

Continued

Table 5.37 Continued

Information Source	TOTAL N	TOTAL % Yes	Number of Hogs Marketed in 1988: 25% or Less % Yes	25% or Less % No	25% or Less Av.*	26 - 50% % Yes	26 - 50% % No	26 - 50% Av.*	51 - 75% % Yes	51 - 75% % No	51 - 75% Av.*	76% + % Yes	76% + % No	76% + Av.*
Newspapers	(270)	83.3 (225)	81.8 (45)	18.2 (10)	3.02	75.3 (64)	24.7 (21)	3.08	91.1 (72)	8.9 (7)	2.89	86.3 (44)	13.7 (7)	2.89
Other Producers	(277)	93.9 (260)	78.2 (43)	21.8 (12)	3.60	96.6 (85)	3.4 (3)	3.61	98.8 (82)	1.2 (1)	3.66	98.0 (50)	2.0 (1)	3.86
Pork Congress	(271)	57.6 (156)	31.5 (17)	68.5 (37)	2.82	54.0 (47)	46.0 (40)	3.32	64.2 (52)	35.8 (29)	3.54	81.6 (40)	18.4 (9)	3.41
Short Courses	(266)	53.0 (141)	25.9 (14)	74.1 (40)	3.29	46.5 (40)	53.5 (46)	3.28	62.3 (48)	37.7 (29)	3.45	79.6 (39)	20.4 (10)	3.55
Radio	(268)	86.6 (232)	90.6 (48)	9.4 (5)	3.40	86.0 (74)	14.0 (12)	3.32	87.3 (69)	12.7 (10)	2.98	82.0 (41)	18.0 (9)	3.02
Swine Specialist	(268)	63.4 (170)	35.8 (19)	64.2 (34)	3.32	65.1 (56)	34.9 (30)	3.38	72.5 (58)	27.5 (22)	3.57	75.5 (37)	24.5 (12)	3.56
Television	(268)	43.7 (117)	34.0 (18)	66.0 (35)	2.61	45.3 (39)	54.7 (47)	2.56	45.0 (36)	55.0 (44)	2.56	49.0 (24)	51.0 (25)	2.71
Universities	(261)	42.1 (110)	28.8 (15)	71.2 (37)	3.67	35.7 (30)	64.3 (54)	2.71	44.2 (34)	55.8 (43)	3.38	64.6 (31)	35.4 (17)	3.63
U of A's Ag/For. Bulletin	(262)	28.6 (75)	20.8 (11)	79.2 (42)	3.00	24.1 (20)	75.9 (63)	2.35	26.9 (21)	73.1 (57)	2.90	47.9* (23)	52.1 (25)	2.79
U of A's Feeders' Day Report	(259)	27.4 (71)	18.9 (10)	81.1 (43)	2.70	23.5 (19)	76.5 (62)	2.25	32.5 (25)	67.5 (52)	3.04	35.4 (17)	64.6 (31)	2.79
U of A Short Courses	(263)	31.6 (83)	17.3 (9)	82.7 (43)	3.38	27.4 (23)	72.6 (61)	2.43	37.2 (29)	62.8 (49)	3.07	44.9 (22)	55.1 (27)	3.13
Veterinarian	(272)	87.9 (239)	72.2 (39)	27.8 (15)	3.68	92.0 (80)	8.0 (7)	3.56	92.5 (74)	7.5 (6)	3.78	90.2 (46)	9.8 (5)	3.70
APPDC Head Office**	(144)	56.3 (81)	41.0 (16)	59.0 (23)	2.75	50.0 (23)	50.0 (23)	2.82	61.5 (24)	38.5 (15)	2.91	90.0 (18)	10.0 (2)	2.94
APPDC Sales Office**	(143)	49.7 (71)	38.5 (15)	61.5 (24)	3.00	48.9 (22)	51.1 (23)	2.96	48.7 (19)	51.3 (20)	3.06	75.0 (15)	25.0 (5)	3.13
Trucker or Assembler**	(144)	43.1 (62)	35.9 (14)	64.1 (25)	3.07	50.0 (23)	50.0 (23)	3.83	41.0 (16)	59.0 (23)	4.19	45.0 (9)	55.0 (11)	3.68

* Average Satisfaction.
** Only asked in telephone interviews.

Table 5.38

Information Sources Utilized by Alberta Pork Producers and Level of Satisfaction Associated with Information by Proportion of Gross Farm Sales From Hogs in 1988. Percentage Distribution of Responses

Information Source	TOTAL		Proportion of Gross Farm Sales From Hogs in 1988											
			25% or Less			26 - 50%			51 - 75%			76% +		
	N	% Yes	% Yes	% No	Av.*	% Yes	% No	Av.*	% Yes	% No	Av.*	% Yes	% No	Av.*
Agribusiness Suppliers	(267)	71.5 (191)	51.0 (23)	49.0 (22)	3.50	53.5 (23)	46.5 (20)	3.0	74.6 (44)	25.4 (15)	3.55	84.2 (101)	15.8 (19)	3.16
Agriculture Canada	(263)	53.2 (140)	42.2 (19)	57.8 (26)	3.16	51.1 (23)	48.9 (22)	2.96	43.9 (25)	56.1 (32)	3.12	62.9 (73)	37.1 (43)	2.85
Alberta Agriculture	(274)	83.6 (229)	65.9 (29)	34.1 (15)	3.48	80.4 (37)	19.6 (9)	3.78	91.7 (55)	8.3 (5)	3.58	87.1 (108)	12.9 (16)	3.45
Pork Production Handbook	(267)	64.4 (172)	53.3 (24)	46.7 (21)	3.46	58.7 (27)	41.3 (19)	3.11	59.3 (35)	40.7 (24)	3.42	73.5 (86)	26.5 (31)	3.36
Bank	(273)	51.6 (141)	35.6 (16)	64.4 (29)	2.38	43.2 (19)	56.8 (25)	2.89	48.3 (28)	51.7 (30)	2.88	61.9 (78)	38.1 (48)	2.81
APPDC Codelbone	(268)	67.2 (180)	55.6 (25)	44.4 (20)	3.30	57.8 (26)	42.2 (19)	3.46	63.8 (37)	36.2 (21)	3.72	76.7 (92)	23.3 (28)	3.88
Agricultural Colleges	(259)	34.4 (89)	31.0 (13)	69.0 (29)	3.15	31.8 (14)	68.2 (30)	3.07	31.6 (18)	68.4 (39)	3.17	37.9 (44)	62.1 (72)	
County Fieldman	(263)	42.6 (112)	34.1 (15)	65.9 (29)	3.20	47.7 (21)	52.3 (23)	3.48	45.8 (27)	54.2 (32)	3.16	42.2 (49)	57.8 (67)	
District Agriculturalist	(272)	88.2 (240)	86.7 (39)	13.3 (6)	3.41	88.9 (40)	11.1 (5)	3.75	95.0 (57)	5.0 (3)	3.77	85.2 (104)	14.8 (18)	
APPDC District Meetings	(268)	66.8 (179)	37.8 (17)	62.2 (28)	2.59	60.9 (28)	39.1 (18)	3.23	70.7 (41)	29.3 (17)	2.92	78.2 (93)	21.8 (26)	
Elevator Agent	(261)	46.4 (121)	31.1 (14)	68.9 (31)	3.14	45.5 (20)	54.5 (24)	3.50	50.9 (29)	49.1 (28)	3.39	50.4 (58)	49.6 (57)	
Western Hog Journal	(277)	95.7 (265)	91.1 (41)	8.9 (4)	3.50	91.3 (42)	8.7 (4)	3.45	96.7 (59)	3.3 (2)	3.75	98.4 (123)	1.6 (2)	
Other Farm Magazines	(279)	89.6 (250)	75.6 (34)	24.4 (11)	3.62	93.5 (43)	6.5 (3)	3.30	90.2 (55)	9.8 (6)	3.12	92.9 (118)	7.1 (9)	3.40
Feed Suppliers	(273)	90.8 (248)	75.6 (34)	24.4 (11)	3.32	89.1 (41)	10.9 (5)	3.64	91.7 (55)	8.3 (5)	3.51	96.7 (118)	3.3 (4)	3.55
Futures Market	(263)	35.0 (92)	34.1 (15)	65.9 (29)	3.06	25.0 (11)	75.0 (33)	3.00	28.8 (17)	71.2 (42)	2.69	42.2 (49)	57.8 (67)	2.82

Continued

Table 5.38 Continued

Information Source	TOTAL N	TOTAL % Yes	Proportion of Gross Farm Sales From Hogs in 1988: 25% or Less % Yes	25% or Less % No	25% or Less Av.*	26 - 50% % Yes	26 - 50% % No	26 - 50% Av.*	51 - 75% % Yes	51 - 75% % No	51 - 75% Av.*	76% + % Yes	76% + % No	76% + Av.*
Newspapers	(271)	83.4 (226)	73.3 (33)	26.7 (12)	3.38	82.6 (38)	17.4 (8)	2.98	84.5 (49)	15.5 (9)	2.98	86.9 (106)	13.1 (16)	2.78
Other Producers	(278)	93.9 (261)	75.6 (34)	24.4 (11)	3.47	95.7 (44)	4.3 (2)	3.48	98.4 (60)	1.6 (1)	3.62	97.6 (123)	2.4 (3)	3.79
Pork Congress	(272)	57.7 (157)	29.5 (13)	70.5 (31)	2.92	60.9 (28)	39.1 (18)	3.33	54.2 (32)	45.8 (27)	3.31	68.3 (84)	31.7 (39)	3.47
Short Courses	(267)	52.8 (141)	37.8 (17)	62.2 (28)	3.47	48.9 (22)	51.1 (23)	2.86	50.8 (30)	49.2 (29)	3.37	61.0 (72)	39.0 (46)	3.41
Radio	(269)	86.2 (232)	84.4 (38)	15.6 (7)	3.47	82.6 (38)	17.4 (8)	3.21	91.2 (52)	8.8 (5)	3.10	86.0 (104)	14.0 (17)	3.13
Swine Specialist	(269)	63.9 (172)	45.5 (20)	54.5 (24)	3.35	62.2 (28)	37.8 (17)	2.93	66.7 (40)	33.3 (20)	3.31	70.0 (84)	30.0 (36)	3.31
Television	(269)	44.2 (119)	29.5 (13)	70.5 (31)	2.69	38.6 (17)	61.4 (27)	2.35	39.0 (23)	61.0 (36)	2.57	54.1 (66)	45.9 (56)	3.11
Universities	(262)	42.0 (110)	36.4 (16)	63.6 (28)	3.5	38.6 (17)	61.4 (27)	3.12	34.6 (20)	65.5 (38)	2.84	49.1 (57)	50.9 (59)	3.12
U of A's Ag/For. Bulletin	(261)	28.4 (74)	24.4 (11)	75.6 (34)	2.91	18.2 (8)	81.8 (36)	2.62	22.8 (13)	77.2 (44)	2.61	36.5 (42)	63.5 (73)	2.81
U of A's Feeders' Day Report	(260)	27.3 (71)	26.7 (12)	73.3 (33)	2.5	27.3 (12)	72.7 (32)	2.58	16.1 (9)	83.9 (47)	2.67	36.2 (38)	63.8 (77)	2.81
U of A's Short Courses	(264)	31.4 (83)	18.6 (8)	81.4 (35)	2.85	31.1 (14)	68.9 (31)	2.64	25.4 (15)	74.6 (44)	2.8	39.3 (46)	60.7 (71)	3.0
Veterinarian	(270)	87.8 (237)	80.0 (36)	20.0 (9)	3.73	83.7 (36)	16.3 (7)	3.68	93.2 (55)	6.8 (4)	3.58	89.4 (110)	10.6 (13)	3.69
APPIDC Head Office**	(144)	56.9 (82)	43.3 (13)	56.7 (17)	2.85	61.3 (19)	38.7 (12)	2.74	44.1 (15)	55.9 (19)	2.5	71.4 (35)	28.6 (14)	3.12
APPIDC Sales Office**	(143)	50.3 (72)	46.7 (14)	53.3 (16)	3.0	61.3 (19)	38.7 (12)	3.11	41.2 (14)	58.8 (20)	3.0	52.1 (25)	47.9 (23)	3.04
Truckers or Assemblers**	(144)	42.4 (61)	33.3 (10)	66.7 (20)	3.0	54.8 (17)	45.2 (14)	4.0	38.2 (13)	61.8 (21)	3.77	42.9 (21)	57.1 (28)	3.86

* Average Satisfaction

** Only asked in telephone interviews

5.5 Need for Specific Information Required by Alberta Pork Producers

5.5.1 Methodology

Table 5.39 indicates the information needs of Alberta pork producers. The eight types of information listed are in general categories derived from the more specific information needs shown in Appendix 5: Tables 1-8.

The data for Table 5.39 was derived from the mail-out questionnaire in Appendix 1 (Section C: Subsection 1-7) and the telephone interview form in Appendix 2 (Section 1). Each of the eight categories in Table 5.39 represent a generalized information need from the various sections within these two data gathering instruments.

A general information category was considered to be needed by a specific respondent if he/she answered "slight-to-very strong need" (coded 2, 3, 4 or 5) for any or all of the specific information categories in the mail-out questionnaire or "yes" in a telephone interview category.

The level of Alberta pork producer use of specific information categories, as shown in Appendix 5: Tables 1-8, was calculated by merging the results from the respective sections of the mailed questionnaire and the telephone interview form.

Table 5.39
Information Needs: General Categories
A Percentage Distribution of Responses

Need Information on:	% Yes
Waste handling and farm usage	49.1
Selection of breeding stock	38.4
Feeds/rations/nutrition	59.5
Hog herd housing	50.2
Care of breeding stock	34.6
Hog herd health/diseases	64.7
Managing/marketing/record-keeping	52.6
Environment and land use regulations	*36.1
	N=289

* This question was only asked in telephone interviews (N=147)

5.5.2 Discussion

5.5.2.1 Need for Information on Swine Herd Health and Disease

The general category of herd health and disease information was needed by the highest percentage (64.7%) of the respondents in Table 5.39. This general category is comprised of eleven specific information categories which are in turn, followed by several sub-sections (

Appendix 5: Table 6).

The most needed information within the category relating to internal parasites was that of being able to diagnose them (39.4%). Making a diagnosis for Mastitis Metritis Aglactia (MMA) was also the most needed information sub-section (32.2%) in the MMA category. Genetic factors relating to Porcine Stress Syndrome (PSS) was the most needed information source (26.3%) within the PSS category. Of the baby pig diseases, Alberta pork producers wanted to know about baby pig scours the most (22.8%). In the Erysipeles and Enzoatic pneumonia information categories producers needed information for diagnosis the most: 32.9% and 37.0%, respectively. The need for information on the causes of dark, firm and dry (DFD) pork and of pale, soft and exudative (PSE) pork and the cost of DFD and PSE pork to the Alberta pork industry were each expressed by 25.3% of the respondents to the PSE and DFD pork category. Information comparing the testers of pregnancy for sows/gilts was needed by 18.3% of the respondents. Relating to the fertility of new boars, boar libido information was needed by 18.3% of responding producers. Information on vaccines for swine and the limitations of these vaccines was needed by 28.0% and 27.0% of respondents, respectively. Information pertaining to the treatment of tail bitten animals was needed by 23.9% of respondents.

5.5.2.2 Need for Information on Feeds / Feeding / Rations and Nutrition

The general information category of feeds, rations and swine nutrition was needed by 59.5% (second highest category in Table 5.39) of respondents. This general category is comprised of eleven specific information categories, which are each in turn comprised of several sub-categories (Appendix 5: Table 3). In the following passage, the most-needed sub-categories will be identified.

Of the sub-categories pertaining to feeding and management of growing-finishing pigs, information on feeding programs was most needed (30.1%). Similarly, 30.1% of respondents needed information on how parasite control related to disease prevention. Information on the selection of a starter feed was the most needed (27.3%) in the feeding of early weaned pigs category. Regarding energy in swine feeding, 33.2% of respondents needed information in digestible energy of feeds. In the category of feed processing techniques, information on processing of cereal grains was most needed (33.2%) by respondents. 29.8% of respondents wanted to know what analysis, relating to feed testing, should be done. Regarding the use of

minerals and vitamins for swine, 29.4% of respondents needed information on the necessary minerals and their sources. The necessary protein levels in swine diets was the most needed information (30.8%) in the protein in swine diets category. In the category of feed additives for swine, producers (30.4%) wanted information on the type of additives available. 27.3% of respondents needed information on the nutrient content of field peas in swine rations. Regarding the use of alfalfa in swine rations, information on the digestible energy in alfalfa and the vitamin and mineral content in alfalfa were both needed by 21.5% of respondents. The nutritional value of high moisture barley was the most needed (16.6%) information in the high moisture barley in swine diets category.

5.5.2.3 Need for Information on Managing, Marketing Decisions and Record Keeping

The general category of managing, marketing decisions and record keeping information was needed by 52.6% (third highest category in Table 5.39) of respondents. This general category is comprised of eight specific information categories which are in turn each comprised of several sub-categories (Appendix 5: Table 7). The most needed sub-categories within the eight specific categories will be identified in the following passage.

Respondents needed information (26.3%) on how to use or analyse information recorded in conjunction with record keeping systems for swine operations. 12.1% of respondents needed information on feeding newly purchased pigs in the management of purchased feeder pigs category. Relating to management routines for large breeding and feeding units, 23.9% of respondents needed information on the record keeping systems available to pork producers. Information on buying/selling tips was needed by 12.1% of respondents, in the marketing of breeding stock category. Relating to new born pig management and mortality, 21.2% of respondents needed information on diseases affecting baby pigs. In the category of planning considerations for beginning swine producers, information on marketing of production and geographic distribution and industry trends were both needed by 17.0% of respondents. Formula pricing methods information was needed by 19.7% of respondents in the weaner pig contest and pricing methods category. In the marketing of finished hogs category, 32.5% of respondents needed information on the pork industry trends.

5.5.2.4 Need for Information on Swine Herd Housing

The general category of swine herd housing information was needed by 50.2% of respondents in Table 5.39. This general category is comprised of two specific information categories: planning the business management system and swine housing facilities (Appendix 5: Table 4). Within these categories information was most needed on hunting and ventilation (23.2%) and ventilation systems (33.2%), respectively.

5.5.2.5 Need for Information on Waste Handling and Farm Usage

The general category of waste handling and farm usage information was needed by 49.1% of respondents in Table 5.39. There are two specific information categories contained within this general category (Appendix 5: Table 1). These are information about those factors affecting the use of manure in crop production and swine manure handling systems. Within these categories, information was most needed on method(s) of application (33.2%) and type of manure handling systems (30.8%), respectively.

5.5.2.6 Need for Information on Selection of Breeding Stock

The general category of selection of breeding stock information was needed by 38.4% of respondents (sixth highest category in Table 5.39). This general category is comprised of four specific information categories (Appendix 5: Table 2) from which the most needed information source will be identified.

Of the congenital defects in swine, 22.8% of respondents needed information on the genetic/environmental effect of spraddle or splay legs. Information on selection programs for breeding stock was needed most (25.6%) in the genetics of swine herd category. In the selection of gilts and replacement sows category, producers needed information about reproductive characteristics the most (21.8%). Information on genetic merits of a boar was most needed (23.3%) in the situation of a herd boar category.

5.5.2.7 Need for Information on Environment and Land Use Regulations

The general category of environment and land use regulations information was needed by 36.1% of respondents to the telephone interviews, as seen in Table 5.39. This general category is comprised of farm specific information categories (Appendix 5: Table 8). These specific

categories are information on county restrictions, environmental regulations and waste management, all of which were needed by 8.8% or less of the respondents to the telephone interviews.

5.5.2.8 Need for Information on Care of Breeding Stock

The general category of care for breeding stock information was needed by 34.1% of respondents (eighth highest category in Table 5.39). This general category is comprised of eight specific information categories (Appendix 5: Table 5) from which the most needed information source will be identified.

Regarding management of gilts and sows for reproduction efficiency prior to breeding information on the selection of gilts and feeding/housing of gilts and sows were both needed by 18.7% of respondents. Information on successful mating and pregnancy diagnosis were both needed by 17.0% of respondents in the management of gilts and sows at breeding. 19.4% of respondents needed information on the feeding of pregnant females and 19.4% needed information on the feeding of weanlings.

In regards to the management of the herd boar(s), nutrition was the most needed (18.3%) management information before breeding. Information on penning conditions was needed by 19.4% of respondents in the herd boar environment category. Determination of boar power was the most needed (19.0%) information relating to breeding practices.

Relating the cross breeding systems for commercial swine production, 19.7% of respondents needed information on terminal or reciprocal cross breeding systems.

5.5.3 Summary of Discussion for Specific Information Needs

In this portion of the study, Alberta pork producers were asked to indicate whether or not they had a current need for a particular type of information. Respondents were presented with a broad scope of topics ranging from Waste Handling and Farm Usage to Managing, Marketing Decisions and Record Keeping (Table 5.39). Each of these general topics are comprised of numerous sub-topics on which Alberta pork producers were asked to indicate their need (see Appendix 5: Tables 1-8).

Table 5.39 tells us that the level of need for the general categories, as indicated by respondents, ranged from 64.7% (Hog Herd Health and Disease Information) to 34.6% (Care of Breeding Stock Information). It was also observed that the level of need for information on the individual sub-sections was only about 40-60% of that observed for the associated general topic.

Factors that may explain the relatively low level of information needs indicated by respondents are that 70.3% of the respondents indicated a level of experience greater than 10 years and there was an emphasis on there being a *current* need for the specific information topics.

5.6 Summary of Analysis and Discussion of Results

This Chapter has presented results on several topics in compliance with objectives of the Information Needs of Alberta Pork Producers Study.

Information on the demographic attributes of the respondents (section 5.2) aided University of Alberta researchers in the analysis and discussion of feedback on their information sources used for acquiring general information (section 5.3) and their level of use and satisfaction with information sources in Alberta (section 5.4). In addition, results on the need for specific types of information required by Alberta pork producers was discussed (section 5.5).

6 Conclusions, Suggestions and Recommendations

6.1 Conclusions

Information relating to different topics, presented in different forms and provided by different institutions is required in the decision making process of Alberta pork producers. Richardson, Hardaker and Anderson (1977) tell us that producers must make production, investment and marketing decisions associated with their businesses. Further, Sen (1977) outlines the decision making process, which consists of four steps, as a producer: 1) defines the objective: 2) identifies the possible choices; 3) collects the relevant information and 4) draws the appropriate inferences. The third step identifies information as being needed for the decision making process, thus by means of the transitive property, information has been identified as being a necessary input in a producer's decision making process.

The primary objectives of this research were:

1. To present a summary on reviewed literature that focuses on diffusion and decision making processes.
2. To conduct research and present a summary of the primary sources of information and extension services available to Alberta pork producers.
3. To determine the sources of the information currently used by Alberta pork producers.
4. To determine the attitudes of the Alberta pork producers towards the sources of information available in Alberta.
5. To determine the informational needs of Alberta pork producers.

In accordance with the forgoing objectives, research activities associated with this thesis have been focussed on (see Figure 1.1):

1. Researching and presenting a summary of reviewed literature focussed on diffusion and decision making. (presented in Chapter 2);
2. Presenting a summary of the primary sources of information and extension sources available to Alberta pork producers (presented in Chapter 4);
3. Determining the sources of information used by Alberta pork producers (presented in Chapter 5.3 and 5.4);

4. Determining the attitudes of the Alberta pork producers towards the available information sources (presented in Chapter 5.4) and
5. Determining the specific informational needs of Alberta pork producers (presented in Chapter 5.5).

In order to accomplish objectives 1 and 2, University of Alberta researchers made use of secondary sources of information. Whereas, in accomplishing objectives 3, 4 and 5, data (producer feedback) were gathered by means of focus groups, mailed questionnaires and telephone interviews.

Crosstabulation analysis was performed on Chapter 5.3 and 5.4. These sections, presenting data on the sources of information used for general information needs and Alberta pork producers' use of information sources, respectively, were analyzed using four control variables; APPDC producer district, years of experience, number of hogs produced in 1988 and proportion of gross farm income from hog sales. In addition, Spearman Rank Order Correlation Coefficient analysis was used to determine the differences in the ranking of the information sources used for general information needs in Chapter 5.3 with respect to the foregoing demographic variables.

6.1.1 Evaluation of Hypotheses

There were several hypotheses proposed in Chapter 1.3. The first four commented on the relationship between information sources used and different demographic variables. The latter four commented on the relationship between the percentage use and satisfaction with information sources and different demographic variables. These specific hypotheses were:

Ho_1: Information sources used by Alberta pork producers for general information needs are similar when crosstabulated by APPDC Producer District variable.

Ho_2: Information sources used by Alberta pork producers for general information needs are similar when crosstabulated by years of experience in the pork industry variable.

Ho_3: Information sources used by Alberta pork producers for general information needs are similar when crosstabulated by the number of hogs marketed in 1988 variable.

Ho_4: Information sources used by Alberta pork producers for general information needs are similar when crosstabulated by the proportion of gross farm sales derived from hog sales variable.

Ho_5: Information sources used by Alberta pork producers and average satisfaction with these sources are similar when crosstabulated by the APPDC Producer District variable.

Ho_6: Information sources used by Alberta pork producers and average satisfaction with these sources are similar when crosstabulated by the years of experience in the hog industry variable.

Ho_7: Information sources used by Alberta pork producers and average satisfaction with these sources are similar when crosstabulated by the number of hogs marketed in 1988 variable.

Ho_8: Information sources used by Alberta pork producers and average satisfaction with these sources are similar when crosstabulated by the proportion of gross farm sales derived from hog sales variable.

In order to comment on the above hypotheses, results of the analysis were observed. Analysis of the data found similar patterns for use of information sources, satisfaction with sources and information needs for APPDC Producer Districts, years of experience in the pork industry, number of hogs marketed in 1988 and proportion of gross farm sales from hogs in 1988.

6.2 Suggestions Arising from this Research

6.2.1 Methodological Suggestions

Ensure that the instruments used for the initial survey and subsequent follow-ups are the same or very similar in format and content. This would facilitate the merging of data files and analysis. Given the objectives of this study, an instrument similar to the telephone interview form (Appendix 3) would be adequate.

Ensure that the data sets are coded in such a manner to allow mechanical merging of data sets.

Academia is currently blessed with personal computers with high speed processing units which can process data at unprecedented speeds. In the past, data sets such as those generated in this study, could only be manipulated by means of a Mainframe computing system. For future studies of this nature it would be recommended that researchers use the former research tool. It would take very few research endeavors like this one to provide justification for a University department to acquire a personal computing system equipped with a high speed processor (386 or above).

For a study of this nature, the use of a concise telephone interview such as the one used in this study would be recommended. This is because Agricultural producers admit to / lament about being constantly asked to respond to surveys. As a result, they tend to disregard written requests for cooperation.

6.2.2 Suggestions for Further Research

Investigation of the characteristics of those producers who did not respond to the demographic question about their APPDC Producer District location. Table 5.1 tells us that 22.0% of the total respondents (34.0% of the telephone interview respondents) did not complete this question. Due to the cost of computing and merging the data files, this study could be conducted using the results from the telephone interviews only. The non-responents could be analyzed with respect to years of experience, number of hogs marketed in 1988 and the proportion of gross farm income derived from hog sales.

Investigation of the demographic variable relating to the age of the respondents would be of use to the respective policy makers associated with the Alberta pork industry. This demographic variable could be used to crosstabulate the information source and the information use and satisfaction variables seen in the previous chapter. By carrying out this procedure, policy makers could gain insight into the future information needs and expectations of the population of pork producers by way of extrapolation.

6.3 Recommendations

The following recommendations arise from observations in previous chapters. These recommendations are intended to assist the APPDC, Alberta Agriculture, Agribusiness firms and the University of Alberta in their extension activities. Chapter 4 reviewed the extension services and information provided to Alberta pork producers by these entities. It was found that each of these entities generated or had access to information related to the pork industry. The use of information sources, satisfaction with these sources and the need for specific information by Alberta pork producers were analyzed and discussed in Chapter 5. This chapter revealed that different information sources were used and viewed differently by producers. Table 5.34 is of particular importance in formulating the following recommendations, which arise from integrating Chapters 4 and 5.

6.3.1 Dissemination of Market Information

Alberta pork producers indicate that their primary sources of market information are Radio and the APPDC. The mandate of the latter is especially suited for the generation and provision of this information. Through the Codephone, cheque stuffers and mailed literature producers may be kept informed. In addition, the APPDC, because of its sales and information base, should ensure that radio stations, such as CFCW, are kept abreast of market information trends.

6.3.2 Dissemination of Herd Housing Information

Sources of information arising from Alberta Agriculture's infrastructure were used often by pork producers. The District Agriculturalists, in particular, were indicated as the end sources of this information. The generation and flow of information within Alberta Agriculture's organization provides D. A. s with this information and the resources to assist producers. Agricultural businesses and other interests producing herd housing information should consider channeling their information on this topic through District Agriculturalists' offices.

6.3.3 Dissemination of Business Management Information

Alberta Agriculture and D. A. s are used often by Alberta pork producers to obtain business management information. The Faculty of Agriculture and agricultural businesses should develop a network through which generated information can be provided to District Agriculturalists.

6.3.4 Dissemination of Government Policy and Program Information

Government policy and program information is gathered most often from District Agriculturalists and Newspapers / Magazines. D. A. s are part of the infrastructure which formulates policies and programs, therefore it is natural that they be enlisted in the process of disseminating this information. In addition, information on government policy and programs should be made available to newspapers and magazines, in a timely manner, by government sources.

6.3.5 Dissemination of Breeding Stock Information

Pork producers, newspapers and magazines are the primary sources of breeding stock information by Alberta pork producers. Entities generating this type of information should make use of the latter two sources to convey their knowledge.

6.3.6 Dissemination of Disease Prevention and Control Information

Veterinarians are used extensively by Alberta pork producers for acquiring disease prevention and control information. Other agricultural businesses, Alberta Agriculture and the University of Alberta should make use of this source to make generated information available to pork producers.

6.3.7 Dissemination of Nutrition Information

Alberta pork producers primarily use feed companies and associated nutritionalists as sources of nutrition information. Alberta Agriculture and the University of Alberta should develop channels through which generated information can be transferred to pork producers by feed companies.

6.3.8 Dissemination of Record Keeping Information

Alberta Agriculture sources, accountants and veterinarians are used often by Alberta pork producers to satisfy record keeping information needs. Other agricultural businesses and The University of Alberta should share advancements in record keeping with the above sources in order to make this information available to Alberta pork producers.

6.3.9 Additional Recommendations

The Faculty of Agriculture should review the effectiveness of the Agriculture and Forestry Bulletin and the Feeders' Day Report. These two instruments are used infrequently by Alberta pork producers and there is little satisfaction expressed with these sources. The resources used to write and publish these magazines could provide better results if they were allocated in a different manner. The individuals currently responsible for the writing and editing the articles could help popularize research and activities of the Faculty of Agriculture and Forestry by providing these articles to the editors of magazines associated with the various respective producer groups. For example, articles generated at the Faculty of Agriculture and relating to the swine industry could be transmitted to Alberta pork producers through the Western Hog Journal.

The APPDC should take an active role in providing Alberta pork producers with information on government programs and policy relating to the swine industry. Information could then be gathered by the representatives of the APPDC which sit on external committees, councils and alliances. The information could be transmitted to producers through the Codephone,

Western Hog Journal and cheque stuffers. The information could be presented completely or be briefly mentioned with the latter being accompanied by a reference that an interested producer could use for further investigation.

Alberta Agriculture should investigate ways of coordinating extension activities. This institution generates and publishes a large amount of information pertaining to the swine industry and other commodity groups. This information could be disseminated to producers more effectively if a position was created to coordinate extension activities, interpret research and popularize results aimed at the commodity groups.

The four entities providing information to Alberta pork producers should make use of Radio as an extension tool. It was observed that although Radio is listed among the information sources most used by producers, the level of satisfaction associated with this source is low. This latter observation could be remedied if reports relating to the swine industry are more substantial.

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8 Appendices

8.1 Appendix 1

Mailed Questionnaire

DELIVERY OF EXTENSION SERVICES TO ALBERTA HOG PRODUCERS

This survey is being conducted so that we can better understand the information needs of Alberta Hog Producers. Please answer all questions. **Thanks for your help. Return to Department of Rural Economy, University of Alberta, Edmonton, Alberta, T6G 2H1, by March 28, 1989.**

Section A: Characteristics of Hog Producers

We need to know some of the characteristics of those in the study. This information is used to assist in the analysis of the data gathered. The analysis is done with categories, therefore all individual characteristics are confidential.

1. What is the sex of the respondent:

   _____ male

   _____ female

2. Into what age category do you fall?

   _____ under 20
   _____ 20-24
   _____ 25-29
   _____ 30-34
   _____ 35-39
   _____ 40-44
   _____ 45-49
   _____ 50-54
   _____ 55-59
   _____ 60-64
   _____ over 65

3. How many years of experience do you have in the swine industry?

   _____ 5 years
   _____ 6-10 years
   _____ 11-15 years
   _____ 16-20 years
   _____ 21-25 years
   _____ 26-30 years
   _____ 31-35 years
   _____ 36-40 years
   _____ over 41 years

4. What was the total number of head (all hogs) that you marketed in 1988? (Please check category which contains your number).

   _____ 1-49
   _____ 50-99
   _____ 100-199
   _____ 200-499
   _____ 500-999
   _____ 1,000-1,499
   _____ 1,500-2,499
   _____ 2,500-4,999
   _____ Over 5,000

5. Please estimate what proportion of your total gross farm sales came from hog sales in 1988. (Please check the category which represents your situation).

_____ Less than 10%
_____ 10-19%
_____ 20-25%
_____ 26-50%
_____ 51-75%
_____ 76-90%
_____ 100%

6. Please estimate your gross farm sales from agricultural production (hogs plus other sales) in 1988. (Please check the category which contains your figure).

_____ Less than $2,500
_____ $2,500-24,999
_____ $25,000-49,999
_____ $50,000-74,999
_____ $75,000-99,999
_____ $100,000-149,999
_____ $150,000-199,999
_____ $200,000-249,000
_____ Over $250,000

7. What is the highest level of education you completed. (Please check the appropriate answer).

_____ Less than high school
_____ Completed high school
_____ Some college/technical school
_____ Completed college/technical school
_____ Some university
_____ Completed university
_____ Post university (graduate school)

8. In which of the Alberta Pork Development Corporation (Alberta Pork Producers Marketing Board) region do you reside?

_____ #1 (Dir. Ralph Erb)
_____ #2 (Dir. Allen Toles)
_____ #3 (Dir. Dan Astner)
_____ #4 (Dir. Jim Smith)
_____ #5 (Dir. Victor Chrapko)
_____ #6 (Dir. Bill Devereux)
_____ #7 (Dir. Harry Dewindt)
_____ #8 (Dir. Jerry Devries)
_____ #9 (Dir. Art Rempel)

9. What type(s) of unit do you operate?

_____ Farrow to finish unit
_____ Farrow to weanter unit
_____ Pure bred breeding stock unit
_____ Weaner to finish unit
_____ Light feeder to finish unit
_____ Feeder to finish unit

Section B: These questions deal with the various information sources that hog producers might use in obtaining information related to their hog production.

1. Please indicate which of these possible sources of information you used in the last year.

Degree of Use
1 = no need (0 use)
2 = slight need (1-2)
3 = moderate need (3-5)
4 = strong need (6-10)
5 = very strong need (11 +)

Degree of Satisfaction With Information Supplied by Source
1 = not satisfied
2 = slightly satisfied
3 = satisfied
4 = strongly satisfied
5 = very satisfied

	Degree of Use	Degree of Satisfaction
Agribusiness suppliers	1--2--3--4--5	1--2--3--4--5
Agriculture Canada (Outlook Publications)	1--2--3--4--5	1--2--3--4--5
Alberta Dept. of Agriculture	1--2--3--4--5	1--2--3--4--5
Alberta Pork Production Handbook	1--2--3--4--5	1--2--3--4--5
Bank/Other Credit Agencies	1--2--3--4--5	1--2--3--4--5
Codephone Phone Service (APPMB/APPDC)	1--2--3--4--5	1--2--3--4--5
Colleges	1--2--3--4--5	1--2--3--4--5
County Fieldman	1--2--3--4--5	1--2--3--4--5
District Agriculturalist	1--2--3--4--5	1--2--3--4--5
District Meetings	1--2--3--4--5	1--2--3--4--5
Elevator Agent	1--2--3--4--5	1--2--3--4--5
Farm Magazines	1--2--3--4--5	1--2--3--4--5
Feed Suppliers	1--2--3--4--5	1--2--3--4--5
Futures Markets (inputs)	1--2--3--4--5	1--2--3--4--5
Futures Markets (Pork)	1--2--3--4--5	1--2--3--4--5
Newspapers	1--2--3--4--5	1--2--3--4--5
Neighbours and Friends	1--2--3--4--5	1--2--3--4--5
Other Hog Producers	1--2--3--4--5	1--2--3--4--5
Pork Congress	1--2--3--4--5	1--2--3--4--5
Pork Short Courses	1--2--3--4--5	1--2--3--4--5
Radio	1--2--3--4--5	1--2--3--4--5
Swine Specialists	1--2--3--4--5	1--2--3--4--5
Television	1--2--3--4--5	1--2--3--4--5
Universities	1--2--3--4--5	1--2--3--4--5
University of Alberta Agriculture & Forestry Bulletin	1--2--3--4--5	1--2--3--4--5
University of Alberta Feeders Day Reports	1--2--3--4--5	1--2--3--4--5
University of Alberta Short Courses	1--2--3--4--5	1--2--3--4--5
Veterinarians	1--2--3--4--5	1--2--3--4--5
Western Hog Journal	1--2--3--4--5	1--2--3--4--5

2. Please indicate the major source you use to obtain the following information

   a. Daily market information _____

   b. Market forecast information _____

   c. New production/technological information _____

   d. Swine housing information _____

   e. Business management information _____

   f. Government programs and policy information _____

   g. Breeding stock information _____

   h. Disease prevention/control information _____

   i. Nutrition information _____

   j. General management information _____

   k. Record keeping information _____

3. Are there any changes you would like to see in the delivery of information to you by the Alberta Pork Producers Marketing Board (Development Corporation)?

   _____ Yes _____ No

   If yes: what changes?

   _____

   _____

   _____

   _____

4. Are there any changes you would like to see in the delivery of information to you by the Alberta Department of Agriculture?

   _____ Yes _____ No

   If yes: what changes?

   _____

   _____

   _____

   _____

Section C: These questions deal with the various areas where information might be needed by pork producers. For each of the skill or knowledge areas listed please circle the number which best indicates your current informational need and requirement level. Would you please also indicate the major source that you use for information on each item and the degree to which you are satisfied with the information supplied.

1. **Waste Handling and Useage**

Swine manure is known to be a source of plant fertilizer. Please indicate your level of information need (on a scale of 1 no need to 5 very strong need) for the following aspects of waste handling and useage.

Degree of Information Need
1 = no need
2 = slight need
3 = moderate need
4 = strong need
5 = very strong need
6 = already have information/experience
7 = not applicable in present situation

Degree of Satisfaction With Information Supplied by Source
1 = not satisfied
2 = slightly satisfied
3 = satisfied
4 = strongly satisfied
5 = very satisfied

a. ***Those factors affecting the use of manure in crop production.***

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Method of application	1--2--3--4--5--6--7	_____	1--2--3--4--5
Crop applied to	1--2--3--4--5--6--7	_____	1--2--3--4--5
Soil characteristics	1--2--3--4--5--6--7	_____	1--2--3--4--5
Application rate	1--2--3--4--5--6--7	_____	1--2--3--4--5

b. ***Swine manure handling systems.***

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Production site selection and planning	1--2--3--4--5--6--7	_____	1--2--3--4--5
Physical and biological aspects of manure	1--2--3--4--5--6--7	_____	1--2--3--4--5
Manure handling systems	1--2--3--4--5--6--7	_____	1--2--3--4--5

2. **Selection of Breeding Stock**

The selection of breeding stock is important to swine herd health and productivity. For each of the skill or knowledge areas listed please circle the number which best indicates your current informational need and requirement level. Would you please also indicate the major source that you use for information on each item and the degree to which you are satisfied with the information supplied.

Degree of Information Need
1 = no need
2 = slight need
3 = moderate need
4 = strong need
5 = very strong need
6 = already have information/experience
7 = not applicable in present situation

Degree of Satisfaction With Information Supplied by Source
1 = not satisfied
2 = slightly satisfied
3 = satisfied
4 = strongly satisfied
5 = very satisfied

a. *Congenital defects.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Heredity of congenital defects	1--2--3--4--5--6--7	_____	1--2--3--4--5
Genetic/environmental defect - ridgling	1--2--3--4--5--6--7	_____	1--2--3--4--5
Genetic/environmental defect - shaker pigs	1--2--3--4--5--6--7	_____	1--2--3--4--5
Genetic/environmental defect - spraddle or splay legs	1--2--3--4--5--6--7	_____	1--2--3--4--5
Genetic/environmental defect - inverted nipples	1--2--3--4--5--6--7	_____	1--2--3--4--5
Culling procedures	1--2--3--4--5--6--7	_____	1--2--3--4--5

b. *Genetics of swine herd.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Herd management and records	1--2--3--4--5--6--7	_____	1--2--3--4--5
Selection programs	1--2--3--4--5--6--7	_____	1--2--3--4--5

c. *Selection of gilts and replacement sows.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Reproductive characteristics	1--2--3--4--5--6--7	_____	1--2--3--4--5
Maternal characteristics	1--2--3--4--5--6--7	_____	1--2--3--4--5
Feed conversion/rate of gain	1--2--3--4--5--6--7	_____	1--2--3--4--5

d. *Selection of herd boar.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Genetical merit	1--2--3--4--5--6--7	_____	1--2--3--4--5
Physical condition	1--2--3--4--5--6--7	_____	1--2--3--4--5
Semen quality	1--2--3--4--5--6--7	_____	1--2--3--4--5
Mating ability	1--2--3--4--5--6--7	_____	1--2--3--4--5

3. **Feeds/Feeding/Rations/Nutrition**

How and what swine are fed will affect performance. For each ... which best indicates your current informational need and the ... that you use for information on each item and the degree to wh... are satisfied with the information supplied.

Degree of Information Need
1 = no need
2 = slight need
3 = moderate need
4 = strong need
5 = very strong need
6 = already have information/experience
7 = not applicable in present situation

Degree of Satisfaction With Information Supplied by Source
1 = not satisfied
2 = slightly satisfied
3 = satisfied
4 = strongly satisfied
5 = very satisfied

a. *Feeding and management of growing finishing hogs*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Heredity of congenital defects	1 2 3 4 5 6 7	_____	1 2 3 4 5
Pen size and grouping	1 2 3 4 5 6 7	_____	1 2 3 4 5
Temperature	1 2 3 4 5 6 7	_____	1 2 3 4 5
Ventilation	1 2 3 4 5 6 7	_____	1 2 3 4 5
Feeding programs	1 2 3 4 5 6 7	_____	1 2 3 4 5
Watering methods	1 2 3 4 5 6 7	_____	1 2 3 4 5

b. *Disease prevention.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Heredity of congenital defects	1 2 3 4 5 6 7	_____	1 2 3 4 5
Sanitation	1 2 3 4 5 6 7	_____	1 2 3 4 5
Parasite control	1 2 3 4 5 6 7	_____	1 2 3 4 5
Tail biting	1 2 3 4 5 6 7	_____	1 2 3 4 5
Cannibalism	1 2 3 4 5 6 7	_____	1 2 3 4 5

c. *Feeding early weaned pigs.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Pre-weaned milk diet	1 2 3 4 5 6 7	_____	1 2 3 4 5
Starter feed selection	1 2 3 4 5 6 7	_____	1 2 3 4 5
Feed presentation	1 2 3 4 5 6 7	_____	1 2 3 4 5
Water availability and quality	1 2 3 4 5 6 7	_____	1 2 3 4 5

d. *Energy in swine feeding.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Feed components supplying energy	1 2 3 4 5 6 7	_____	1 2 3 4 5
Digestible energy of feeds	1 2 3 4 5 6 7	_____	1 2 3 4 5
Factors affecting digestible energy of feeds	1 2 3 4 5 6 7	_____	1 2 3 4 5
Feed stuffs supplying energy	1 2 3 4 5 6 7	_____	1 2 3 4 5

e. *Feed processing techniques.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Processing protein meals	1--2--3--4--5--6--7		1--2--3--4--5
Processing cereal grains	1--2--3--4--5--6--7		1--2--3--4--5
Grinding	1--2--3--4--5--6--7		1--2--3--4--5
Pelleting	1--2--3--4--5--6--7		1--2--3--4--5
Paste and liquid feeding	1--2--3--4--5--6--7		1--2--3--4--5
High moisture grains	1--2--3--4--5--6--7		1--2--3--4--5

f. *Feed testing.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
What analysis should be done	1--2--3--4--5--6--7		1--2--3--4--5
Sampling	1--2--3--4--5--6--7		1--2--3--4--5
Time of analysis	1--2--3--4--5--6--7		1--2--3--4--5
Where to have feed sampled	1--2--3--4--5--6--7		1--2--3--4--5
How to use results	1--2--3--4--5--6--7		1--2--3--4--5

g. *Use of minerals and vitamins for swine.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Necessary minerals, vitamins and their sources	1--2--3--4--5--6--7		1--2--3--4--5
Required amounts of minerals and vitamins	1--2--3--4--5--6--7		1--2--3--4--5
Method of application	1--2--3--4--5--6--7		1--2--3--4--5

h. *Protein in swine diets.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Necessary protein levels	1--2--3--4--5--6--7		1--2--3--4--5
Sources of protein	1--2--3--4--5--6--7		1--2--3--4--5
Testing feed for protein levels	1--2--3--4--5--6--7		1--2--3--4--5

i. *Feed additives for swine.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Regulation concerning use	1--2--3--4--5--6--7		1--2--3--4--5
Purpose for additives	1--2--3--4--5--6--7		1--2--3--4--5
Types of additives	1--2--3--4--5--6--7		1--2--3--4--5
Additives for weanlings	1--2--3--4--5--6--7		1--2--3--4--5
Additives for treatment of swine dysentry	1--2--3--4--5--6--7		1--2--3--4--5
Additives for growing and finishing hogs	1--2--3--4--5--6--7		1--2--3--4--5
Additives for sows	1--2--3--4--5--6--7		1--2--3--4--5
Choosing additives	1--2--3--4--5--6--7		1--2--3--4--5
Withdrawal periods	1--2--3--4--5--6--7		1--2--3--4--5

j. *Use of field peas in swine rations.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Regulation concerning use	1--2--3--4--5--6--7		1--2--3--4--5
Nutrient content	1--2--3--4--5--6--7		1--2--3--4--5

Amino acid content	1 2 3 4 5 6 7	_____	1 2 3 4 5
Palitability of field peas	1 2 3 4 5 6 7	_____	1 2 3 4 5
Feeding methods	1 2 3 4 5 6 7	_____	1 2 3 4 5
Processing methods	1 2 3 4 5 6 7	_____	1 2 3 4 5
Economics of feeding field peas	1 2 3 4 5 6 7	_____	1 2 3 4 5

k. *Use of alfalfa in swine rations.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Nutrient content of alfalfa	1 2 3 4 5 6 7	_____	1 2 3 4 5
Protein and amino acid content of alfalfa	1 2 3 4 5 6 7	_____	1 2 3 4 5
Digestible energy of alfalfa	1 2 3 4 5 6 7	_____	1 2 3 4 5
Vitamin and mineral content	1 2 3 4 5 6 7	_____	1 2 3 4 5
Use in growing-finishing ration	1 2 3 4 5 6 7	_____	1 2 3 4 5
Use in gestation rations	1 2 3 4 5 6 7	_____	1 2 3 4 5
Use in pre-farrowing rations	1 2 3 4 5 6 7	_____	1 2 3 4 5
Use in lactation rations	1 2 3 4 5 6 7	_____	1 2 3 4 5

l. *High moisture barley in swine rations.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Storage of high moisture barley	1 2 3 4 5 6 7	_____	1 2 3 4 5
Acid prevention	1 2 3 4 5 6 7	_____	1 2 3 4 5
Processing high moisture barley	1 2 3 4 5 6 7	_____	1 2 3 4 5
Nutritional value of high moisture barley	1 2 3 4 5 6 7	_____	1 2 3 4 5

4. **Swine Herd Housing**

The cost of good housing and its affects on production cause a swine barn to be planned well for optimal growing conditions. For each of the skill or knowledge areas listed please circle the number which best indicates your current informational need and requirement level. Would you please also indicate the major source that you use for information on each item and the degree to which you are satisfied with the information supplied.

Degree of Information Need
1 = no need
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Degree of Satisfaction With Information Supplied by Source
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a. *Planning the building management system.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Space allocation	1 2 3 4 5 6 7	_____	1 2 3 4 5
Feed handling	1 2 3 4 5 6 7	_____	1 2 3 4 5
Manure handling	1 2 3 4 5 6 7	_____	1 2 3 4 5
Heating and ventilation	1 2 3 4 5 6 7	_____	1 2 3 4 5
Moving hogs	1 2 3 4 5 6 7	_____	1 2 3 4 5
Planning for expansion and alternate use	1 2 3 4 5 6 7	_____	1 2 3 4 5
Zoning laws and regulations	1 2 3 4 5 6 7	_____	1 2 3 4 5

b. *Swine housing facilities:*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Space allocation	1--2--3--4--5--6--7	_____	1--2--3--4--5
Operation size	1--2--3--4--5--6--7	_____	1--2--3--4--5
Arrangement of buildings	1--2--3--4--5--6--7	_____	1--2--3--4--5
Construction material	1--2--3--4--5--6--7	_____	1--2--3--4--5
Flooring materials	1--2--3--4--5--6--7	_____	1--2--3--4--5
Electrical systems	1--2--3--4--5--6--7	_____	1--2--3--4--5
Lighting systems	1--2--3--4--5--6--7	_____	1--2--3--4--5
Ventilation systems	1--2--3--4--5--6--7	_____	1--2--3--4--5
Heating systems	1--2--3--4--5--6--7	_____	1--2--3--4--5
Water supplies	1--2--3--4--5--6--7	_____	1--2--3--4--5
Farrowing equipment	1--2--3--4--5--6--7	_____	1--2--3--4--5
Farrowing housings	1--2--3--4--5--6--7	_____	1--2--3--4--5
Swine feed processing	1--2--3--4--5--6--7	_____	1--2--3--4--5
Swine feed handling systems	1--2--3--4--5--6--7	_____	1--2--3--4--5
Dust control	1--2--3--4--5--6--7	_____	1--2--3--4--5

5. **Care of Breeding Stock**

Breeding stock require different management than finishing hogs. For each of the skill or knowledge areas listed please circle the number which best indicates your current informational need and requirement level. Would you please also indicate the major source that you use for information on each item and the degree to which you are satisfied with the information supplied.

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1 = no need
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a. ***Management of the gilt and sow for reproductive efficiency.***

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Management Prior to Breeding:			
Culling	1--2--3--4--5--6--7	_____	1--2--3--4--5
Selection of gilts	1--2--3--4--5--6--7	_____	1--2--3--4--5
Feeding/housing	1--2--3--4--5--6--7	_____	1--2--3--4--5
Management at Breeding:			
Heat detection	1--2--3--4--5--6--7	_____	1--2--3--4--5
Successful mating	1--2--3--4--5--6--7	_____	1--2--3--4--5
Pregnancy diagnosis	1--2--3--4--5--6--7	_____	1--2--3--4--5
Management of the Pregnant Female:			
Feeding during gestation	1--2--3--4--5--6--7	_____	1--2--3--4--5
Feeding patterns	1--2--3--4--5--6--7	_____	1--2--3--4--5
Housing and environment	1--2--3--4--5--6--7	_____	1--2--3--4--5
Management of the Weaning:			
Feeding	1--2--3--4--5--6--7	_____	1--2--3--4--5
Housing	1--2--3--4--5--6--7	_____	1--2--3--4--5

b. *Management of the herd boar(s).*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Management before breeding:			
Time of purchase	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Transportation	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Isolation	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Age	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Nutrition	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Environment:			
Breeding area	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Penning conditions	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Space requirements	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Temperature	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Breeding practices:			
Hand breeding	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Pen breeding	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Determination of boar power	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5

c. *Cross breeding systems for commercial swine production.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Advantage/disadvantage of cross breeding	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Cross breeding systems:			
Terminal or reciprical crosses	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Rotational or continuous	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Crossbred boars	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Choosing breeds	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5

6. Swine Herd Health/Disease

The healthiness of the swine herd is vital to production and returns from production. For each of the skill or knowledge areas listed please circle the number which best indicates your current informational need and requirement level. Would you please also indicate the major source that you use for information on each item and the degree to which you are satisfied with the information supplied.

Degree of Information Need
1 = no need
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Degree of Satisfaction With Information Supplied by Source
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a. *Internal parasite.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Types of parasites	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Signs/diagnosis	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Causes/transmission	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Treatment	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5
Prevention	1 - 2 - 3 - 4 - 5 - 6 - 7	_____	1 - 2 - 3 - 4 - 5

b. *MMA (Mastitis Metritis Agalactia)*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
What is MMA	1--2--3--4--5	_____	1--2--3--4--5
Signs/diagnosis	1--2--3--4--5	_____	1--2--3--4--5
Causes/transmission	1--2--3--4--5	_____	1--2--3--4--5
Treatment/prevention	1--2--3--4--5	_____	1--2--3--4--5

c. *Porcine stress syndrome (PSS).*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
What is PSS	1--2--3--4--5--6--7	_____	1--2--3--4--5
Genetic factors	1--2--3--4--5--6--7	_____	1--2--3--4--5
Tests/diagnosis	1--2--3--4--5--6--7	_____	1--2--3--4--5
Relationship to meat quality	1--2--3--4--5--6--7	_____	1--2--3--4--5

d. *Diseases of baby pigs.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Streptococcal infection	1--2--3--4--5--6--7	_____	1--2--3--4--5
Anemia	1--2--3--4--5--6--7	_____	1--2--3--4--5
Transmissible gastroentritis	1--2--3--4--5--6--7	_____	1--2--3--4--5
Baby pig encephalitis	1--2--3--4--5--6--7	_____	1--2--3--4--5
Baby pig scours	1--2--3--4--5--6--7	_____	1--2--3--4--5

e. *Erysipelas.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
What is erysipelas	1--2--3--4--5--6--7	_____	1--2--3--4--5
Signs/diagnosis	1--2--3--4--5--6--7	_____	1--2--3--4--5
Causes/transmission	1--2--3--4--5--6--7	_____	1--2--3--4--5
Treatment/prevention	1--2--3--4--5--6--7	_____	1--2--3--4--5

f. *Enzootic pneumonia.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
What is enzootic pnumonia	1--2--3--4--5--6--7	_____	1--2--3--4--5
Signs/Diagnosis	1--2--3--4--5--6--7	_____	1--2--3--4--5
Causes/transmission	1--2--3--4--5--6--7	_____	1--2--3--4--5
Treatment/prevention	1--2--3--4--5--6--7	_____	1--2--3--4--5

g. *Pale, soft exudative (PSE) and dark, firm, dry (DFD) Pork.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Conversion from muscle to meat	1--2--3--4--5--6--7	_____	1--2--3--4--5
Characteristics of PSE pork	1--2--3--4--5--6--7	_____	1--2--3--4--5
Causes of PSE pork	1--2--3--4--5--6--7	_____	1--2--3--4--5
Characteristics of DFD pork	1--2--3--4--5--6--7	_____	1--2--3--4--5
Causes of DFD pork	1--2--3--4--5--6--7	_____	1--2--3--4--5
Cost of PSE and DFD pork to industry	1--2--3--4--5--6--7	_____	1--2--3--4--5
Minimizing the incident of PSE and DFD pork carcasses	1--2--3--4--5--6--7	_____	1--2--3--4--5

h. *Pregnancy tests for sows/gilts.*

	Degree of Need	Indicate Where Information Was Obtained	Degree of Satisfaction
Doppler ultrasonic	1--2--3--4--5--6--7	_____	1--2--3--4--5
Pulse - echo ultrasonic	1--2--3--4--5--6--7	_____	1--2--3--4
Comparing testers	1--2--3--4--5--6--7	_____	1--2--3--4
Using tests in management	1--2--3--4--5--6--7	_____	1--2--3--4

i. *Fertility of new boars.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Libido	1--2--3--4--5--6--7	_____	1--2--3--4--5
Ability to mount	1--2--3--4--5--6--7	_____	1--2--3--4--5
Ability to mate	1--2--3--4--5--6--7	_____	1--2--3--4--5
Semen collection and evaluation	1--2--3--4--5--6--7	_____	1--2--3--4--5

j. *Vaccination of swine.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Principle of immunity	1--2--3--4--5--6--7	_____	1--2--3--4--5
Vaccines	1--2--3--4--5--6--7	_____	1--2--3--4--5
Limitations of vaccines	1--2--3--4--5--6--7	_____	1--2--3--4--5
Developing a vaccination program	1--2--3--4--5--6--7	_____	1--2--3--4--5
Communical vaccines	1--2--3--4--5--6--7	_____	1--2--3--4--5
Use of hypodermic needles	1--2--3--4--5--6--7	_____	1--2--3--4--5

k. *Tail biting in swine.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Causes of tail biting	1--2--3--4--5--6--7	_____	1--2--3--4--5
Prevention methods	1--2--3--4--5--6--7	_____	1--2--3--4--5
Treatment for tail bitten animals	1--2--3--4--5--6--7	_____	1--2--3--4--5

Managing/Marketing Decisions/Record Keeping

Record keeping of past production and market conditions can aid in making future managerial and marketing decisions. For each of the skill or knowledge areas listed please circle the number which best indicates your current informational need and requirement level. Would you please also indicate the major source that you use for information on each item and the degree to which you are satisfied with the information supplied.

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a. *Record keeping systems for swine operations.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Establishing a record keeping system	1--2--3--4--5--6--7	_____	1--2--3--4--5
How to use or analysis information recorded	1--2--3--4--5--6--7	_____	1--2--3--4--5

b. *Management of purchased feeder pigs.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Transportation losses	1--2--3--4--5--6--7	_____	1--2--3--4--5
Preparation for arrival	1--2--3--4--5--6--7	_____	1--2--3--4--5
Feeding newly purchased pigs	1--2--3--4--5--6--7	_____	1--2--3--4--5
Medication/vaccination	1--2--3--4--5--6--7	_____	1--2--3--4--5

c. *Management routines for large breeding and feeding units.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Record systems available	1--2--3--4--5--6--7	_____	1--2--3--4--5
Management and supervision of:			
Barn	1--2--3--4--5--6--7	_____	1--2--3--4--5
Office staff	1--2--3--4--5--6--7	_____	1--2--3--4--5
Feed programs	1--2--3--4--5--6--7	_____	1--2--3--4--5
Herd health programs	1--2--3--4--5--6--7	_____	1--2--3--4--5
Maintenance programs	1--2--3--4--5--6--7	_____	1--2--3--4--5
Incentive programs	1--2--3--4--5--6--7	_____	1--2--3--4--5
Company operations	1--2--3--4--5--6--7	_____	1--2--3--4--5
Swine industry	1--2--3--4--5--6--7	_____	1--2--3--4--5

d. *Marketing breeding stock.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Alberta Swine Breeders Association	1--2--3--4--5--6--7	_____	1--2--3--4--5
Breeding guarantee	1--2--3--4--5--6--7	_____	1--2--3--4--5
Registration paper	1--2--3--4--5--6--7	_____	1--2--3--4--5
Buying/selling tips	1--2--3--4--5--6--7	_____	1--2--3--4--5

e. *New born pig management.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Mortality:			
Still births	1 2 3 4 5 6 7		1 2 3 4 5
Weakness and starvation	1 2 3 4 5 6 7		1 2 3 4 5
Crushing	1 2 3 4 5 6 7		1 2 3 4 5
Disease	1 2 3 4 5 6 7		1 2 3 4 5
Physiological factors	1 2 3 4 5 6 7		1 2 3 4 5
Behavioral factors	1 2 3 4 5 6 7		1 2 3 4 5

f. *Planning considerations for beginning swine producers.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Types of swine operations:			
Farrowing	1 2 3 4 5 6 7		1 2 3 4 5
Feeder	1 2 3 4 5 6 7		1 2 3 4 5
Farrow to finish	1 2 3 4 5 6 7		1 2 3 4 5
Breeder	1 2 3 4 5 6 7		1 2 3 4 5
Size of operation	1 2 3 4 5 6 7		1 2 3 4 5
Site selection	1 2 3 4 5 6 7		1 2 3 4 5
Financing options	1 2 3 4 5 6 7		1 2 3 4 5
Purchasing breeding stock	1 2 3 4 5 6 7		1 2 3 4 5
Feed requirement	1 2 3 4 5 6 7		1 2 3 4 5
Marketing of production	1 2 3 4 5 6 7		1 2 3 4 5
Geographic distribution and industry trends	1 2 3 4 5 6 7		1 2 3 4 5

g. *Weaner pig contract and pricing methods.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Formula pricing methods	1 2 3 4 5 6 7		1 2 3 4 5
Contracts for supplying weaner pigs	1 2 3 4 5 6 7		1 2 3 4 5

h. *Marketing of finished hogs.*

	Degree of Need	Indicate Where Information Was Obtained:	Degree of Satisfaction
Explanation of index	1 2 3 4 5 6 7		1 2 3 4 5
Improving the index of your hogs	1 2 3 4 5 6 7		1 2 3 4 5
Industry trends	1 2 3 4 5 6 7		1 2 3 4 5
Analysis of correct weight for market	1 2 3 4 5 6 7		1 2 3 4 5
Role of the Alberta Hog Producers Dev. Corp. in the marketing of finished hogs	1 2 3 4 5 6 7		1 2 3 4 5

Section D: Are there any other areas of concern that you have?

_____

_____

_____

_____

8.2 Appendix 2

Telephone Interview Form

APPDC SURVEY

Good morning/afternoon/evening. Is _____ in? This is _____ from the University of Alberta. We are doing a study on the delivery of extension services to Alberta hog producers for the Alberta Pork Producers Development Corporation (APPDC). This survey is being conducted so that we can better understand the information needs of hog producers like yourself. Do you have a few minutes to help us out? (IF THEY SAY THEY HAVE ALREADY DONE A MAIL SURVEY, SAY THAT THIS IS A FOLLOW UP, AND TRY TO CONVINCE THEM TO CONTINUE.)

1. Could you please tell me whether you need information on the following topics, and if so, what kind of information you require?

	NEED INFORMATION? YES	NO	CODE
WASTE HANDLING AND FARM USAGE	1	2	_____
NEED INFO ON: _____			_____
_____			_____
SELECTION OF BREEDING STOCK	1	2	_____
NEED INFO ON: _____			_____
_____			_____
FEEDS/RATIONS/NUTRITION	1	2	_____
NEED INFO ON: _____			_____
_____			_____
HOG HERD HOUSING	1	2	_____
NEED INFO ON: _____			_____
_____			_____
CARE OF BREEDING STOCK	1	2	_____
NEED INFO ON: _____			_____
_____			_____
HOG HERD HEALTH/ DISEASES	1	2	_____
NEED INFO ON: _____			_____
_____			_____
MANAGING/ MARKETING/ RECORD-KEEPING	1	2	_____
NEED INFO ON: _____			_____
_____			_____
ENVIRONMENT AND LAND USE REGULATIONS	1	2	_____
NEED INFO ON: _____			_____
_____			_____

2. Could you please tell me the sources you use to obtain information on each of the following topics?

	CODE
MARKET INFORMATION SOURCES: _____	___
HERD HOUSING INFORMATION SOURCES: _____	___
BUSINESS MANAGEMENT INFORMATION SOURCES: _____	___
GOVERNMENT PROGRAMS/ POLICY INFORMATION SOURCES: _____	___
BREEDING STOCK INFORMATION SOURCES: _____	___
DISEASE PREVENTION/CONTROL INFORMATION SOURCES: _____	___
NUTRITION INFORMATION SOURCES: _____	___
RECORD-KEEPING INFORMATION SOURCES: _____	___

3. This section deals with the various information sources that hog producers might use in obtaining information related to their hog operation. I have a list here of about twenty information sources: for each one I cite, could you please tell me whether you use the source, and if you do, could you tell me how satisfied you are with the information you receive from that source. Please rate this level of satisfaction on a scale of 1 to 5, 1 meaning "NOT SATISFIED WITH THE INFORMATION" and 5 meaning "VERY SATISFIED".

	USE? YES	USE? NO	LEVEL OF SATISFACTION (not satisfied)				(very satisfied)
AGRIBUSINESS SUPPLIERS	1	2	1	2	3	4	5
AGRICULTURE CANADA (OUTLOOK)	1	2	1	2	3	4	5
ALBERTA AGRICULTURE	1	2	1	2	3	4	5
ALBERTA PORK PRODUCTION HANDBOOK	1	2	1	2	3	4	5
BANK OR OTHER CREDIT AGENCIES	1	2	1	2	3	4	5
APPDC CODEPHONE	1	2	1	2	3	4	5
AGRICULTURAL COLLEGES	1	2	1	2	3	4	5
COUNTY FIELDMAN	1	2	1	2	3	4	5
DISTRICT AGRICULTURIST	1	2	1	2	3	4	5
APPDC DISTRICT MEETINGS	1	2	1	2	3	4	5
ELEVATOR AGENT	1	2	1	2	3	4	5
WESTERN HOG JOURNAL	1	2	1	2	3	4	5
OTHER FARM MAGAZINES	1	2	1	2	3	4	5

	USE? YES	USE? NO	LEVEL OF SATISFACTION not satisfied				very satisfied
FEED SUPPLIERS	1	2	1	2	3	4	5
FUTURES MARKETS	1	2	1	2	3	4	5
NEWSPAPERS	1	2	1	2	3	4	5
OTHER PORK PRODUCERS	1	2	1	2	3	4	5
PORK CONGRESS	1	2	1	2	3	4	5
PORK SHORT COURSES	1	2	1	2	3	4	5
RADIO	1	2	1	2	3	4	5
SWINE SPECIALISTS	1	2	1	2	3	4	5
TELEVISION	1	2	1	2	3	4	5
UNIVERSITIES	1	2	1	2	3	4	5
UNIV. OF ALBERTA'S AGRICULTURE FORESTRY BULLETIN	1	2	1	2	3	4	5
U OF A'S FEEDERS DAY REPORTS	1	2	1	2	3	4	5
U OF A'S SHORT COURSES	1	2	1	2	3	4	5
VETERINARIANS	1	2	1	2	3	4	5
PORK BOARD HEAD OFFICE -EDMONTON	1	2	1	2	3	4	5
PORK BOARD SALES OFFICE	1	2	1	2	3	4	5
TRUCKER OR ASSEMBLER	1	2	1	2	3	4	5

4. Are there any changes you would like to see in the delivery of information to you by:

ALBERTA AGRICULTURE:

_____

_____

ALBERTA PORK PRODUCERS DEVELOPMENT CORPORATION:

_____

_____

AGRI-BUSINESS SUPPLIERS:

_____

_____

UNIVERSITY OF ALBERTA:

_____

_____

_____

In order to study the differences in the information needs of different pork producers, we'd like to be able to classify producers who answer our survey according to certain characteristics. All the information will be kept strictly confidential.

_____

5. Could you tell me which of the APPDC districts you live in?

1. District 1--Andy Vanessen
2. District 2--Allen Toles
3. District 3--Dan Astner
4. District 4--Jim Smith
5. District 5--Ken Rempel
6. District 6--Bill Devereux
7. District 7--Harry Dewindt
8. District 8--Jurgen Preugschas
9. District 9--Art Rempel
0. No response

6. What type of production unit do you operate?

0. no response
1. farrow to finish
2. farrow to weaner
3. weaner to finish
4. feeder to finish
5. pure bred breeding stock

7. Could you tell me how many years of experience you have in the pork industry?

1. 1-5 years
2. 6-10 years
3. 11-15 years
4. 16-20 years
5. 21-25 years
6. 26-30 years
7. 31-35 years
8. 36-40 years
9. 41 or more years
0. no response

8. Would you mind telling me the total number of head, approximately, that you marketed in 1988? (ALL HOGS)

1. 1-49
2. 50-99
3. 100-199
4. 200-499
5. 500-999
6. 1000-1499
7. 1500-2499
8. 2500-4999
9. over 5000
0. no response

9. Could you estimate what proportion of your total gross farm sales came from hog sales in 1988?

1. less than 10 %
2. 10-19 %
3. 20-25 %
4. 26-50 %
5. 51-75 %
6. 76-90 %
7. 91-100 %
0. no response

10. Could you please estimate your gross farm sales from total agricultural production in 1988? (HOGS PLUS OTHER SALES) Again, this information will kept strictly confidential.

1. less than $2500
2. 2500 - 24 999
3. 25 000 - 49 999
4. 50 000 - 74 999
5. 75 000 - 99 999
6. 100 000 - 149 999
7. 150 000 - 199 999
8. 200 000 - 249 999
9. over 250 000
0. no response

11. What is the highest level of formal education that you have achieved?

1. less than high school
2. completed high school
3. some college/ technical school
4. some university
5. completed university degree
6. post graduate degree
0. no response

12. Would you mind telling me the age category in which you fall?

1. under 20
2. 20 - 24
3. 25 - 29
4. 30 - 44
5. 45 - 49
6. 50 - 54
7. 55 - 59
8. 60 - 64
9. 65 and over
0. no response

13. (note the sex of the respondent)

1. Male
2. Female

14. Do you have any other information needs or concerns about delivery systems ?

_____

_____

8.3 Appendix 3

Media and Events Facilitated by the Faculty of Agriculture and Forestry

8.3.1 Appendix 3.1: Articles in Feeders' Day Reports Pertaining to Swine Production

68th Annual Feeders' Day Report June 1989

1. The nutrient requirements of gestating and lactating sows. H. Spicer and F. X. Aherne
2. Nutritional evaluation of Wapiti triticale as a grain source for starter and grower pigs. H. Spicer and F. X. Aherne
3. The influence of energy and protein intake on plasma progesterone and embryo survival. A. Pharazyn and F. X. Aherne
4. Rate of passage studies and pigs fed soybean meal and canola meal diets supplemented with three different fat levels. M. Imbeah and W. C. Sauer
5. The effect of dietary pectin on digestibility of protein and amino acids. R. Mosenthin, W. C. Sauer, L. Ozimek, and F. X. Aherne

67th Annual Feeders' Day Report June 1988

1. Validation of the 1988 National Research Council recommendations for the nutrient requirements of gestating and lactating sows. H. Spicer and F. X. Aherne
2. The effect of dietary fat level on the digestible amino acid supply and rate of passage in soybean meal diets for pigs. M. Imbeah and W. C. Sauer
3. An evaluation of the nutritive value of soft white spring wheat in starter diets for weanling pigs. W. I. J. Magowan and F. X. Aherne
4. An evaluation of a new variety of hulless barley (TR607) for young pigs. H. Spicer and F. X. Aherne
5. An evaluation of great northern beans as a protein supplement for young pigs. H. Spicer and F. X. Aherne
6. The influence of feeding level during lactation and the following pregnancy on the reproductive performance of sows. S. K. Baidoo, R. N. Kirkwood and F. X. Aherne

66th Annual Feeders' Day Report June 1987

1. The nutritive value of canola meal for early weaned pigs. S. K. Baidoo and F. X. Aherne
2. Canola meal as a protein supplement for growing-finishing pigs. S. K. Baidoo and F. X. Aherne

3. An evaluation of the feeding values of full fat canola seed for weanling pigs. J. Shaw and F. X. Aherne
4. Effects of frost damage and pre-harvest sprouting on the feeding value of barley for pigs. D. Plett, F. X. Aherne and M. J. Hancock
5. Effect of the antibiotic tiamulin in the diet of pigs from adequately or underfed sows. E. Beltramena and F. X. Aherne
6. The influence of feeding allyl trenbolone in lactation on reproductive performance of primiparous and multiparous sows. R. N. Kirkwood and F. X. Aherne
7. Folacin requirements of the lactating sow. A. Pharazyn and F. X. Aherne.
8. The effects of sow nutrition on leg weakness in their offspring. B. Walker and F. X. Aherne
9. The effect of pre-weaning handling and post-weaning mixing on the incidence of osteochondrosis in pigs. B. Walker and F. X. Aherne
10. The effect of diet composition and protein status of the pig on endogenous protein losses in pigs. C. F. M. de Lange, W. C. Sauer. R. Mosenthin and W. B. Souffrant

65th Annual Feeders' Day Report July, 1986

1. Treatment of boar leg weakness. J. J. Brennan and F. X. Aherne
2. Swine industry in the Netherlands. C. F. M. de Lange, L. A. den Hartog and W. C. Sauer
3. Dilution of a pig diet: Effect on digestibility and the practical relevance. L. A. den Hartog, M. W. A. Verstegen, J. Huisman and F. X. Aherne
4. Effect of flavor additives on utilization of canola meal by young pigs. S. K. Baidoo and F. X. Aherne
5. An evaluation of the nutritive value of hulless barley for young pigs. F. X. Aherne and H. Spicer
6. The effect of health on the onset of puberty in gilts. L. A. den Hartog, E. R. Slingerland, G. J. Noordewier and F. X. Aherne
7. The influence of plane of feeding on the onset of puberty and ovulation rates at first and second estrus in gilts. R. N. Kirkwood, F. X. Aherne and E. Bettramena
8. The influence of lactation feed intake and gonadotrophin releasing hormone (GnRH) therapy on the reproductive performance of sows. R. N. Kirkwood, E. S. Lythgoe and F. X. Aherne

9. The effects of weight loss during lactation on reproductive performance in primiparous and multiparous sows Part I: feed intake, weight change and fat loss. E. S. Lythgoe and F. X. Aherne Part II: milk yield and composition, pig mortality and growth rate. E. S. Lythgoe and F. X. Aherne
10. The influence of level of weight and backfat change during lactation on the subsequent reproductive performance of sows. R. N. Kirkwood, S. K. Baidoo, F. X. Aherne and A. P. Sather
11. A comparison of boars and barrows for growth and carcass characteristics at four slaughter weights. L. L. Nicholls and M. A. Price
12. Biotin synthesis in the large intestine of the pig. W. C. Sauer, L. Ozimek, L. A. den Hartog, R. Mosenthin and L. Volker

64th Annual Feeders' Day Report June 1985

1. Effect of feeding level after weaning on the reproductive efficiency in sows. S. K. Baidoo and F. X. Aherne
2. Reproductive performance of sows inseminated with fresh or thawed semen. R. N. Kirkwood, S. Harbinson, B. Allen and A. P. Sather
3. Nutritional and pharmacological effects on estrus cycle activity in gilts. R. J. Christopherson, M. Evans and F. D. Evans
4. Effects of treatment at birth with tryptophan, tryosine, or choline on metabolic rate and cold tolerance in pigs. R. J. Christopherson and M. Evans
5. The effects of castration and implanted sex hormones on growth in swine. Z. I. Chaudhary and M. A. Price
6. Steroid levels and taint intensity in backfat of 100 and 130 kg boars and gilts. J. J. Brennan, P. J. Shand, M. Fenton, L. L. Nicholls and F. X. Aherne
7. Effect of weight stress on joint integrity in growing swine. J. J. Brennan and F. X. Aherne
8. Effects of movement at weaning on the health and performance of pigs. H. M. Spicer and F. X. Aherne
9. Effects of dietary lysine on blood lysine concentrations in growing pigs. D. Conway, R. Early, W. C. Sauer and J. R. Thompson

10. The mobile nylon bag technique for determining the digestibilities of protein in protein supplements for pigs. G. Cherian, W. C. Sauer and L. Ozimek
11. Ileal digestibility of high moisture and dry barley diets for growing swine. E. Weltzien and F. X. Aherne
12. The effects of soybean protease inhibitors on ileal and fecal amino acid digestibility and pancreas function. L. Ozimek, W. C. Sauer, G. Ozimek and D. M. Conway
13. Ileal versus fecal fat and crude protein digestibilities by weaned pigs. B. Endres, F. X. Aherne, L. Ozimek and J. P. Bowland

63rd Annual Feeders' Day Report June 1984

1. Fat utilization by pigs weaned at four weeks of age. B. Endres and F. X. Aherne
2. The effects of adding oats to starter diets on the performance of young pigs. L. Nicholls and F. X. Aherne
3. An evaluation of canola meal as a protein supplement for growing pigs (20-60 kg). S. K. Baidoo, F. X. Aherne and J. P. Bowland
4. The performance of growing pigs fed high moisture barley. E. Weltzien, F. X. Aherne and J. J. Brennan
5. Availability of amino acids in barley-based diets supplemented with soybean meal or sunflower meal fed to finishing swine. P. A. Thacker, W. C. Sauer and H. Jorgensen
6. Effect of calcium and phosphorous levels in the diet on the incidence of leg weakness in swine. J. J. Brennan and F. X. Aherne
7. Marketing losses during pre-slaughter handling of pigs. P. D. Warriss and D. Lister
8. The mobile nylon bag technique for determining the digestibilities of dry matter and energy in feedstuffs for pigs. W. C. Sauer and L. Ozimek
9. The ileal and fecal digestibilities of fat and fatty acids on pigs fed semi-purified diets containing beef tallow or rapeseed oil. L. Ozimek, W. C. Sauer, W. Kozikowski and H. Jorgensen

62nd Annual Feeders' Day Report June 1983

1. The modified nylon bag technique for determining protein digestibilities in feedstuffs for pigs. W. C. Sauer, H. Jorgensen, S. Jaikaran and L. Ozimek

2. Prediction of available amino acid supply for individual feed ingredients: amino acid availabilities in barley, canola meal, and in a complete barley-canola meal diet. W. C. Sauer, R. Cichon and L. Ozimek
3. Canola meal for starter (10-20 kg) pigs. S. K. Baidoo and F. X. Aherne
4. Fumaric and citric acid as feed additives in starter pig nutrition. J. Falkowski and F. X. Aherne
5. Nitrogen balance of canola meal based diets fed to starter pigs. M. K. McIntosh and F. X. Aherne
6. The effects of flavor additives on the consumption of canola meal by starter pigs. M. K. McIntosh, S. K. Baidoo and F. X. Aherne
7. The performance and carcass composition of starter pigs fed high and low-protein diets supplemented with synthetic lysine and threonine. J. F. Falkowski and F. X. Aherne
8. Lysine and threoinine supplementation of barley diets for growing swine. G. J. Bonneau, D. J. Giebelhaus, S. J. Matichuk, B. Southord, G. G. Wenger and A. B. Wilde
9. Effect of growth rate or restricted movement on the incidence of osteochondrosis in growing swine. T. Nakano, F. X. Aherne and J. R. Thompson
10. Dietary laxatives for sows during gestation and lactation. F. X. Aherne
11. Protein quality and urea recycling in finishing swine fed barley based diets supplemented with soybean meal or sunflower meal. P. A. Thacker, H. Jorgensen, W. C. Sauer
12. The effect of level and quality of fat on the secretion of digestive enzymes by the pancreas in the pig. L. Ozimek, W. C. Sauer and G. Ozimek
13. Effects of boar exposure on induction of puberty in the gilt. F. Evans, T. Van Lunen, F. X. Aherne and R. J. Christopherson
14. The choice of a selection index for swine. B. B. Allan and H. T. Fredeen

61st Annual Feeders' Day Report June 1982

1. Vitamin C supplementation of starter pig diets. T. Nakano, F. X. Aherne and J. R. Thompson
2. An evaluation of fish silage as a protein supplement for starter pigs. F. X. Aherne
3. The effects of starter diet composition on pig performance. F. X. Aherne
4. Canola meal for starter (4-8 weeks of age). M. K. McIntosh and F. X. Aherne

5. Taste preferences of piglets fed soybean meal and canola meal supplemented diets. M. K. McIntosh and F. X. Aherne
6. Some management practices affecting the survival and growth rate of suckling pigs. F. X. Aherne
7. The effects of frequency of feeding creep feed on the feed intake and performance of suckling pigs. F. X. Aherne
8. The response of growing-finishing swine to Bacitracin MD fed in typical Western Canadian type diets. F. X. Aherne
9. The effects of composition of diet and system of feeding on feed wastage and performance of growing pigs. F. X. Aherne
10. An evaluation of meat and bone meal from different sources in the diets of growing pigs. F. X. Aherne, D. Nelson, L. Nicholls and A. Van Biert
11. Amino acid availabilities in protein sources for swine. H. Jorgensen and W. C. Sauer
12. Total and digestible yield of nutrients for swine in barley cultivars. W. C. Sauer, D. M. Anderson and H. Jorgensen
13. Pancreatic secretion in the pig. J. H. Hee, R.Berzins and W. C. Sauer

60th Annual Feeders' Day Report June 1981

1. Protein: energy ratio for starter pigs. F. X. Aherne and A. H. Jensen
2. An evaluation of different feeding systems for pigs at weaning. F. X. Aherne and A. H. Jensen
3. The effects of methods of feeding on the performance and carcass quality of growing-finishing swine. F. X. Aherne, A. H. Jensen and K. Adams
4. Lysine for starter pigs. F. X. Aherne, H. E. Neilson, W. Warren and A. H. Jensen
5. Lysine supplementation of barley based diets for growing swine. F. X. Aherne, R. Dunn, G. Healy, W. Koerson, H. Spicer and E. Weltzien
6. Lysine supplementation of low protein diets for growing pigs. F. X. Aherne and W. C. Sauer
7. The effect of protein content in barley on the performance of growing pigs fed different protein supplements. F. X. Aherne and W. C. Sauer
8. Effects of starch infusion on nitrogen balance and apparent amino acid digestibilities in pigs fed barley or wheat diets. R. Misir and W. C. Sauer

9. An evaluation of canola meal (var: Candle) as a protein supplement for starter pigs 3-0 weeks of age. M. K. McIntosh and F. X. Aherne
10. Amino acid availabilities in barley-based canola meal and soybean meal diets for pigs. W. C. Sauer, R. Cichon and H. Jorgensen
11. Sunflower meal as protein source for young pigs. H. E. Neilson and F. X. Aherne
12. Cholesterol metabolism in pigs fed propionic acid containing diets supplemented with soybean meal or canola meal. P. A. Thacker, J. P. Bowland and M. Fenton
13. Performance and carcass traits of pigs fed diets containing propionic acid supplemented with Vitamin B-12. P. A. Thacker and J. P. Bowland

59th Annual Feeders' Day Report June 1980

1. A survey of factors influencing pork carcass quality in Alberta. R. Westra, J. R. Thompson, R. J. Christopherson and R. T. Hardin
2. The effects of creep feeding on pre and post weaning pig performance. F. X. Aherne, V. Danielson and H. E. Neilson
3. Fat utilization by three week weaned pigs. F. X. Aherne, V. Danielson, and H. E. Neilson
4. Distribution of small piglets in relation to birth order. R. O. Parker, F. X. Aherne and B. A. Young
5. Effects of housing system on the recovery of boars from leg weakness. T. Nakano, F. X. Aherne and J. R. Thompson
6. Amino acid availabilities in rapeseed meal. W. C. Sauer, R. M. Cichon
7. Nutritional evaluation of high lysine barleys. R. Misir and W. C. Sauer
8. The complementary value of alfalfa meal with other protein sources in swine rations. W. C. Sauer, F. X. Aherne and Ruth Berg
9. Evaluation of extruded starter diets for early weaned pigs. W. C. Sauer, F. X. Aherne, A. B. Pierce
10. Performance and carcass traits of swine fed graded levels of propionic acid. T. A. Thacker and J. P. Bowland
11. The use of Dysprosium as a marker in routine feed evaluation. J. J. Kennelly, F. X. Aherne and M. J. Apps

12. A critical look at the fecal analysis method for the determination of protein and amino acid digestibilities: the effect of starch infusion at the terminal ileum of growing pigs fed diets containing two different protein sources. R. Misir and W. C. Sauer
13. The effect of fiber addition to swine diets on digestibility coefficients. J. J. Kennelly, F. X. Aherne and W. C. Sauer

8.3.2 Appendix 3.2: Summary of Banff Pork Seminar Programs

1988 Alberta Pork Seminar January 27-28, 1988

Main Topics: Health, Housing, Management, Meat.

Representatives Present From:

Alberta Agriculture;

--- Brian Kennedy, Regional Engineer

--- Dennis Darby

--- Greg Dill

--- W. M. Stone, Health Management Branch

--- D. S. Harbinson, Swine A.I. Center

--- Fred Schuld, Head, Swine Branch

--- Marvin Solomens, Regional Swine Specialist

University of Alberta;

--- Jerry Leonard, Agricultural Engineering

--- Frank Aherne, Animal Science

Agriculture Canada;

--- S. D. M. Jones, Lacombe, Alberta

Industry;

--- Ed Doornenbal, Veterinarian

--- C. S. Rhodes, Western College of Veterinary Medicine, Saskatoon

--- Tony Kempster, Meat and Livestock Commission, Bletchley, England

--- Dave Turner, principle Resource Management Ltd., Edmonton

--- Roy Barrett, Producer (Ponoka)

--- Paul Hemsworth, Department of Agriculture and Rural Affairs, Victoria, Australia

1987 Alberta Pork Seminar January 28-30, 1987

Main Topics: Disease, Ventilation, Management.

Representatives Present From:

Alberta Agriculture;

--- Robert Borg, Swine Specialist

--- W. M. Stone, Health Management Branch

--- Fred Schuld, Head, Swine Branch

University of Alberta;

--- John J. R. Feddes, Agricultural Engineering

--- H. M. Spicer, Animal Science

--- Frank X. Aherne, Animal Science

Agriculture Canada;

--- Anne Marie B. de Passille, Lennoxville, Quebec

Industry;

--- Seaton Baxter, School of Surveying, Robert Gordon's Institute of Technology, Aberdeen, Scotland

--- William H. Close, Agricultural Food and Research Council, Institute for Grassland and Animal Production, Reading, England

--- M. Standford Shedd, University of Calgary

--- Lilly J. Schubert-Walker, University of Brandon

--- Richard H. C. Penny, Royal Veterinary College, University of London, Warwickshire, England

--- Edward C. Schultz, Alberta Pork Producer's Marketing Board, Edmonton

--- Phil A. Thacker, Prairie Swine Center, Saskatoon

--- E. M. Barber, Agricultural Engineering, University of Saskatoon

1986 Alberta Pork Seminar January 15-17, 1986

Main Theme: "Innovative Production for Lean Times"

Representatives Present From:

Alberta Agriculture;

--- Brian Kennedy, Regional Engineer

University of Alberta;

--- Roy Kirkwood, Animal Science

--- Frank Aherne, Animal Science

Agriculture Canada;

--- S. D. Morgan Jones, Lacombe

--- A. P. Sather, Lacombe

Industry;

--- Austin J. Lewis and Duane E. Reese, University of Nebraska, Lincoln, Nebraska

--- T. P. Lyons, Alltech, Inc., Nicholasville, Kentucky

--- Gary L. Allse, Kansas State University, Manhattan, Kansas

--- E. David Morgan, Veterinarian (Picture Butte)

--- Kelly J. Dunham, University of Iowa, Oakdale, Iowa

--- Stu Bauck, Central Swine Veterinary Services, Beiseiker

--- Shirley Rebus, Marketing Home Economist, Calgary

1985 Alberta Pork Seminar January 16-18, 1985

Theme: "Improving Our Competitive Position".

Representatives Present From:

Alberta Agriculture;

--- Gary Bradshaw, Regional Engineer

--- Brian Kennedy, Regional Engineer

University of Alberta;

--- Keith Salmon, Animal Science

--- Frank Aherne, Animal Science

--- H. Spicer, Animal Science

Agriculture Canada;

--- Howard Fredeen, Lacombe

Industry;

--- Rodger K. Johnson, University of Nebraska, Lincoln, Nebraska

--- William Hall, University of Illinois, Urbana, Illinois

--- John E. Riley, Ministry of Agriculture, Fisheries and Food, Cambridge, England

--- James A. Merchant, University of Iowa, Iowa City, Iowa

--- Lydia Kawun, L. Kawun & Associates, Edmonton

--- Dennis Hodginson, Manitoba Agriculture

--- Michael Sheridan, Veterinarian (Steinbach, Manitoba)

--- Ed C. Schultz, Alberta Pork Producers Marketing Board, Edmonton

1984 Alberta Pork Seminar January 18-20, 1984

Theme: "Pork Production Management".

Representatives Present From:

Alberta Agriculture;

--- Robert Borg, Regional Swine Specialist

--- H. M. Stone, Health Management Branch

--- Carlyle Ross

--- Fred Schuld, Head, Swine Branch

University of Alberta;

--- Jim Copeland, Rural Economy

--- Frank Aherne, Animal Science

Agriculture Canada;

--- David Frazer, Ottawa

Industry;

--- Philip Dziuk, University of Illinois, Urbana, Illinois

--- Colin T. Whittemore, Edinburgh School of Agriculture, Edinburgh, Scotland

--- Gary Whalley, Alberta Pork Producers Marketing Board, Edmonton

--- Stanley E. Curtis, University of Illinois, Urbana, Illinois

--- G. I. Christison, University of Saskatchewan

8.3.3 Appendix 3.3: Faculty of Agriculture and Forestry Theses relating to the Alberta Pork Industry

Note: The name(s) in the brackets ( ) indicate the department advisor(s) for the project

1988 Theses:

Ph.D. ;

De Lange, C. F. M. ----- Endogenous protein digestibility studies in pigs. Department of Animal Science (W. C. Sauer)

1987 Theses:

Ph.D. ;

Lythgoe, E. S. ----- Metabolic and endocrinological consequences of nutritional stress imposed over successive lactations in primiparous and multiparous sows. Department of Animal Science (F. X. Aherne)

M.Sc. ;

Gibson, D. ----- Influence of sulphur dioxide on the preservation and nutritive value of high moisture barley for cattle and swine. Department of Animal Science (J. Kennelly)

Higginson, N. ----- North American Hog Pricing Relationships. Department of Rural Economy (M. H. Hawkins)

Shaw, I. ----- Evaluation of full fat canola seed as an energy source for young pigs. Department of Animal Science (F. X. Aherne)

Walker, B. ----- The effects of maternal nutrition and mechanical stress on the incidence of osteochondrosis in swine. Department of Animal Science (F. X. Aherne)

1986 Theses:

Ph.D. ;

Brennan, J. J. ----- Etiology of osteochondrosis in swine. Department of Animal Science (F. X. Aherne)

Leonard, J. J. ----- Ventilation inlets for animal housing. Department of Agricultural Engineering

1985 Theses:

Ph.D. ;

Allan, B. B. ----- The effects of nongenetic factors on Record of Performance (ROP) test results of pigs. Department of Animal Science (R. Berg and H. T. Fredeen) M.Sc. ;

Chardhary, Z. I. ----- Effects of anabolic agents on bone growth in cattle and swine. Department of Animal Science (Price, M. A.)

Conway, D. M. ----- Studies of amino acid digestion and absorption in growing pigs. Department of Animal Science (F. X. Aherne)

Medina ----- Effects of meat processes on meat products. Department of Food Science.

Smith, G. ----- Hog transportation in Alberta. Department of Rural Economy (M. H. Hawkins)

Spicer, H. ----- The effect of nutrition and management on the performance, health, and behavior of weanling pigs. Department of Animal Science (F. X. Aherne)

Van Lunen, T. A. ----- A study of puberty indication on the gilt. Department of Animal Science (F. X. Aherne)

1984 Theses:

M.Sc. ;

Baah, S. O. ----- Pricing efficiency in the Alberta Hog Industry. Department of Rural Economy (M. H. Hawkins)

Baidoo, S. K. ----- Evaluation of canola meal for swine. Department of Animal Science (F. X. Aherne)

Hee, J. ----- Pancreatic secretions in the growing pig. Department of Animal Science (W. C. Sauer)

McArthur, J. ----- Lead-lag price relationships in beef and pork sectors. Department of Rural Economy (M. H. Hawkins)

1983 Theses:

M.Sc. ;

McIntosh, M. ----- Canola meal as a protein supplement for swine. Department of Animal Science (F. X. Aherne)

1982 Theses:

Ph.D. ;

Misei, R. ----- 1) Nitrogen metabolism in the hindgut of the growing pig and ----- 2) Composition and utilization of high lysine barleys by growing rats and pigs. Department of Animal Science (W. C. Sauer)

M.Sc. ;

Clark, P. ----- Heat and moisture loads in swine barns. Department of Agricultural Engineering

1981 Theses:

M.Sc. ;

Leavitt, S. S. ----- Market performance of the Alberta Pork Producers Marketing Board. Department of Rural Economy (M. H. Hawkins and M. M. Veeman)

Zenko, E. V. ----- Exchange rate effects on agricultural and trade with special reference to the Canadian pork industry. Department of Rural Economy (M. M. Veeman)

1980 Theses:

Ph.D. ;

Kennelly, J. J. ----- Fiber utilization by swine. Department of Animal Science (F. X. Aherne)

Nakano, T. ----- Joint abnormality in swine. Department of Animal Science (F. X. Aherne)

Philips, P. ----- Modelling protein and fat gains in growing pigs exposed to low environmental temperatures. Department of Animal Science (B. A. Young)

8.3.4 Appendix 3.4: Articles related to the Pork Industry in the Agriculture and Forestry Bulletin

Spring 1989:

1. Taking Research to the Farm. p. 8.

Spring 1986:

1. The Biological Availability of Biotin in Feedstuffs for Pigs. W. C. Sauer. p. 24.
2. Collogen Cross-Bridging: The Role of Prostaglandins in the Development of Normal and Diseased Pig Joint Cartilage. J. R. Thompson. p. 25.
3. Etiology of Development of Leg Weakness in Swine. J. R. Thompson. p. 25.
4. Evolution of the Nutritive Value of Canola Meal for Pigs by Aid of the Modified Nylon Bag Technique. W. C. Sauer. p. 27.
5. A Study of the Potential of Increasing the Reproductive Efficiency of Gilts. F. X. Aherne and T. VanLuen. p. 28.

March 1985:

Air Quality in Confinement Animal Housing - Is There Cause for Concern? J. B. McQuitty. p.32.

Aug./Nov. 1981:

1. Evolution of Swine Selection Programs. H. T. Fredeen p.14.
2. Operating a Closed Herd. H. T. Fredeen. p.18.

May/Aug. 1980:

Improve Husbandry by Understanding Livestock Behavior. T. Tennessen. p.7.

8.4 Appendix 4

Use of Information Sources: Sorted by Percentage Use and Average Satisfaction

Table 1
Source: Table 5.35: APPDC Producer District Results Sorted by Percentage Use of Information Sources

TOTAL		1 & 2		3 & 4		5 & 6		8		7 & 9	
Western Hog Journal	96.80	Western Hog Journal	98.10	Western Hog Journal	100.00	Other Producers	91.90	Western Hog Journal	96.60	Western Hog Journal	100.00
Other Producers	95.50	Other Producers	98.10	Other Farm Magazines	98.00	Western Hog Journal	89.20	Other Producers	96.60	Other Farm Magazines	95.80
Other Farm Magazines	92.80	Other Farm Magazines	96.20	Feed Suppliers	97.90	Other Farm Magazines	89.20	Feed Suppliers	93.10	Other Producers	95.80
Feed Suppliers	92.60	Alberta Agriculture	92.30	Other Producers	93.90	Feed Suppliers	88.90	Veterinarian	93.10	District Agriculturalist	91.30
District Agriculturalist	88.80	Feed Suppliers	92.20	Newspapers	93.30	Radio	88.90	District Agriculturalist	91.40	Feed Suppliers	87.50
Radio	88.10	Veterinarian	88.20	Veterinarian	91.80	District Agriculturalist	88.10	Newspapers	91.40	Alberta Agriculture	87.00
Alberta Agriculture	86.70	District Agriculturalist	88.00	APPDC Head Office	90.00	Alberta Agriculture	77.80	Radio	89.70	Radio	87.00
Newspapers	86.00	Agribusiness Suppliers	86.00	Alberta Agriculture	89.80	Newspapers	72.20	Other Farm Magazines	86.20	Newspapers	83.30
Veterinarian	83.70	Newspapers	84.30	Agribusiness Suppliers	87.20	APPDC District Meetings	70.60	Alberta Agriculture	84.50	APPDC District Meetings	78.30
Agribusiness Suppliers	77.00	Radio	84.30	District Agriculturalist	87.20	Agribusiness Suppliers	69.40	APPDC Codephone	81.00	Pork Production Handbook	77.30
APPDC District Meetings	76.40	APPDC District Meetings	80.00	APPDC District Meetings	87.20	Pork Production Handbook	64.70	Trucker or Assembler	75.00	APPDC Codephone	73.90
APPDC Codephone	72.30	APPDC Codephone	78.00	Pork Congress	85.70	Pork Congress	64.70	APPDC Head Office	72.70	Elevator Agent	73.90
Swine Specialist	67.60	Pork Congress	74.50	Radio	78.00	Veterinarian	63.00	Swine Specialist	69.00	Veterinarian	73.90
Pork Production Handbook	67.10	Swine Specialist	70.60	Pork Production Handbook	71.70	Agriculture Canada	61.80	APPDC Sales Office	67.40	Agribusiness Suppliers	72.70
APPDC Head Office	64.90	Pork Production Handbook	70.00	Swine Specialist	68.10	APPDC Codephone	58.80	Agribusiness Suppliers	67.20	Swine Specialist	72.70
Pork Congress	63.60	Short Courses	60.00	APPDC Codephone	66.70	Swine Specialist	57.10	APPDC District Meetings	67.20	Agriculture Canada	69.60
Short Courses	58.00	Agriculture Canada	59.20	Short Courses	66.00	Short Courses	50.00	Bank	60.30	APPDC Head Office	68.70
Agriculture Canada	56.30	Bank	55.10	Television	63.30	Universities	50.00	Pork Production Handbook	58.60	Short Courses	65.20
Bank	52.80	Agricultural Colleges	54.20	Universities	60.00	APPDC Head Office	46.70	County Fieldman	56.60	Television	56.50
APPDC Sales Office	50.90	County Fieldman	47.90	APPDC Sales Office	60.00	APPDC Sales Office	40.00	Short Courses	51.70	Universities	52.10
Elevator Agent	49.50	Elevator Agent	46.60	Bank	59.60	Elevator Agent	38.20	Agriculture Canada	50.00	APPDC Sales Office	50.00
Trucker or Assembler	49.50	Television	44.00	Elevator Agent	52.30	Television	37.10	Elevator Agent	46.60	Bank	47.80
Universities	48.10	APPDC Head Office	43.60	Futures Market	51.10	County Fieldman	36.40	Universities	46.60	County Fieldman	47.80
County Fieldman	46.60	Futures Market	41.70	U of A Short Courses	51.10	Futures Market	35.30	Pork Congress	39.70	Pork Congress	45.80
Television	45.10	U of A's Ag/For; Bull	38.30	Agriculture Canada	50.00	U of A Short Courses	32.40	Television	31.00	U of A's Ag/For; Bull	45.50
Futures Market	39.40	Trucker or Assembler	37.50	U of A's Ag/For; Bull	48.70	Bank	31.40	Agricultural Colleges	29.80	Trucker or Assembler	41.70
Agricultural Colleges	39.30	Universities	35.40	U of A's Feeders' Day Rp.	42.20	Agricultural Colleges	31.30	Futures Market	29.80	Futures Market	40.90
U of A's Ag/For; Bull	33.00	U of A's Feeders' Day Rp	31.30	Agricultural Colleges	41.30	U of A's Feeders' Day Rp	26.50	U of A Short Courses	27.60	Agricultural Colleges	39.10
U of A Short Courses	31.70	U of A Short Courses	30.00	County Fieldman	37.00	U of A's Ag/For; Bull	23.50	U of A's Feeders' Day Rp.	24.60	U of A Short Courses	36.40
U of A's Feeders' Day Rp.	31.20	APPDC Sales Office	18.80	Trucker or Assembler	20.00	Trucker or Assembler	13.30	U of A's Ag/For; Bull	18.00	U of A's Feeders' Day Rp	33.30

Table 2
Source: Table 5.36: Years of Experience Results Sorted by Percentage Use of Information Sources

TOTAL		10 or Less		11–25		26+	
Western Hog Journal	95.30	Other Producers	95.20	Western Hog Journal	97.40	Western Hog Journal	93.60
Other Producers	93.90	Western Hog Journal	94.00	Other Producers	94.90	Other Farm Magazines	92.30
Feed Suppliers	90.50	Feed Suppliers	92.70	Feed Suppliers	91.40	Other Producers	91.00
Other Farm Magazines	89.60	District Agriculturalist	91.50	Veterinarian	88.80	Radio	89.20
District Agriculturalist	88.30	Veterinarian	90.20	District Agriculturalist	88.70	Feed Suppliers	86.80
Veterinarian	88.00	Other Farm Magazines	89.30	Other Farm Magazines	88.10	District Agriculturalist	84.20
Radio	85.80	Radio	86.60	Newspapers	86.20	Veterinarian	84.20
Alberta Agriculture	84.00	Alberta Agriculture	85.40	Alberta Agriculture	84.50	Newspapers	82.90
Newspapers	83.10	Pork Production Handbook	78.80	Radio	82.50	Alberta Agriculture	81.80
Agribusiness Suppliers	71.60	Newspapers	78.80	APPDC District Meetings	71.90	Agribusiness Suppliers	72.00
APPDC Codephone	66.50	Agribusiness Suppliers	76.30	Agribusiness Suppliers	68.10	APPDC District Meetings	61.30
APPDC District Meetings	66.50	APPDC Codephone	74.10	APPDC Codephone	67.00	Swine Specialist	60.80
Pork Production Handbook	64.20	Swine Specialist	67.90	Pork Congress	64.10	APPDC Codephone	57.50
Swine Specialist	63.70	APPDC District Meetings	63.80	Swine Specialist	62.60	Agriculture Canada	54.20
Pork Congress	57.50	APPDC Head Office	61.70	Pork Production Handbook	62.30	APPDC Head Office	52.40
APPDC Head Office	56.20	Pork Congress	58.00	Agriculture Canada	59.60	Pork Production Handbook	51.40
Agriculture Canada	53.40	Short Courses	56.80	Bank	55.30	APPDC Sales Office	51.20
Short Courses	52.60	Bank	56.10	Short Courses	54.80	Pork Congress	46.70
Bank	50.40	County Fieldman	55.20	APPDC Head Office	54.40	Short Courses	44.40
APPDC Sales Office	49.70	Television	54.20	Elevator Agent	53.20	Trucker or Assembler	42.90
County Fieldman	47.70	Trucker or Assembler	48.90	APPDC Sales Office	52.60	County Fieldman	41.70
Elevator Agent	46.20	APPDC Sales Office	44.70	Television	49.10	Elevator Agent	41.70
Television	45.80	Agriculture Canada	43.60	Universities	47.80	Universities	38.90
Universities	43.90	Universities	42.60	County Fieldman	45.10	Bank	36.10
Trucker or Assembler	42.50	Agricultural Colleges	41.00	U of A Short Courses	38.30	Television	32.40
Futures Market	35.20	Elevator Agent	40.50	Futures Market	38.10	Futures Market	31.00
Agricultural Colleges	34.60	Futures Market	35.00	Trucker or Assembler	36.80	Agricultural Colleges	29.60
U of A Short Courses	31.30	U of A Short Courses	27.50	Agricultural Colleges	33.30	U of A's Feeders' Day Rp	28.20
U of A's Ag/For;. Bull.	28.60	U of A's Ag/For;. Bull.	25.60	U of A's Ag/For;. Bull.	33.00	U of A's Ag/For;. Bull	25.00
U of A's Feeders' Day Rp.	27.60	U of A's Feeders' Day Rp.	24.10	U of A's Feeders' Day Rp.	29.70	U of A Short Courses	24.30

Table 3
Source: Table 6.37: Number of Hogs Marketed Results Sorted by Percentage Use of Information Sources

TOTAL		1-499		500-1499		1500-2499		2500+	
Western Hog Journal	95.30	Radio	90.60	Western Hog Journal	97.70	Feed Suppliers	96.80	Western Hog Journal	100.00
Other Producers	93.60	Western Hog Journal	87.50	Other Producers	96.60	Other Producers	96.60	Other Producers	98.00
Feed Suppliers	90.60	District Agriculturalist	82.10	Other Farm Magazines	92.00	Western Hog Journal	95.10	Other Farm Magazines	94.10
Other Farm Magazines	89.90	Newspapers	81.80	Veterinarian	92.00	Other Farm Magazines	94.00	Feed Suppliers	94.10
District Agriculturalist	88.20	Other Producers	78.20	Feed Suppliers	91.90	Veterinarian	92.50	APPDC District Meetings	94.00
Veterinarian	87.90	Other Farm Magazines	78.80	Alberta Agriculture	90.60	District Agriculturalist	92.40	Alberta Agriculture	92.20
Radio	86.60	Feed Suppliers	74.50	District Agriculturalist	89.70	Newspapers	91.10	Agribusiness Suppliers	90.20
Alberta Agriculture	84.20	Veterinarian	72.20	Radio	88.00	Radio	87.30	Veterinarian	90.20
Newspapers	83.30	Alberta Agriculture	63.60	Newspapers	75.30	Alberta Agriculture	86.40	APPDC Head Office	90.00
Agribusiness Suppliers	72.20	Pork Production Handbook	58.90	Agribusiness Suppliers	73.80	Agribusiness Suppliers	75.60	APPDC Codephone	87.80
APPDC Codephone	66.70	APPDC Codephone	53.70	Swine Specialist	65.10	APPDC District Meetings	75.30	Newspapers	86.30
APPDC District Meetings	66.30	Agribusiness Suppliers	47.20	APPDC Codephone	62.40	Swine Specialist	72.50	District Agriculturalist	85.70
Pork Production Handbook	64.30	APPDC Head Office	41.00	APPDC District Meetings	61.20	APPDC Codephone	67.10	Radio	82.00
Swine Specialist	63.40	APPDC Sales Office	36.50	Pork Production Handbook	61.00	Pork Congress	64.20	Pork Congress	81.60
Pork Congress	57.60	APPDC District Meetings	36.40	Elevator Agent	54.80	Bank	63.80	Short Courses	79.60
APPDC Head Office	56.30	Trucker or Assembler	35.90	Pork Congress	54.00	Pork Production Handbook	63.60	Pork Production Handbook	78.50
Agriculture Canada	53.20	Swine Specialist	35.80	Agriculture Canada	52.40	Short Courses	62.30	Swine Specialist	75.50
Short Courses	53.00	Television	34.00	APPDC Head Office	50.00	APPDC Head Office	61.50	APPDC Sales Office	75.00
Bank	50.40	Agriculture Canada	32.70	Trucker or Assembler	50.00	Agriculture Canada	59.20	Agriculture Canada	68.00
APPDC Sales Office	49.70	Pork Congress	31.50	APPDC Sales Office	48.80	County Fieldman	51.80	Bank	67.30
Elevator Agent	48.40	County Fieldman	30.20	Short Courses	46.50	APPDC Sales Office	48.70	Universities	64.60
Television	43.70	Elevator Agent	30.20	Agricultural Colleges	46.30	Elevator Agent	48.10	Agricultural Colleges	58.30
Trucker or Assembler	43.10	Futures Market	30.20	Television	45.50	Television	45.60	Futures Market	52.10
County Fieldman	42.60	Universities	28.80	County Fieldman	42.40	Universities	44.20	Elevator Agent	50.00
Universities	42.10	Bank	28.30	Bank	41.70	Trucker or Assembler	41.60	Television	48.00
Futures Market	35.70	Short Courses	25.90	Universities	39.70	Futures Market	39.70	U of A's Ag/For., Bull	47.90
Agricultural Colleges	35.10	U of A's Ag/For., Bull	20.80	U of A Short Courses	27.40	Agricultural Colleges	37.70	Trucker or Assembler	45.00
U of A Short Courses	31.60	Agricultural Colleges	20.00	Futures Market	26.20	U of A Short Courses	37.20	U of A Short Courses	44.90
U of A's Ag/For., Bull	26.90	U of A's Feeders' Day Rp	18.90	U of A's Ag/For., Bull	24.10	U of A's Feeders' Day Rp	32.50	County Fieldman	41.70
U of A's Feeders' Day Rp	27.40	U of A Short Courses	17.30	U of A's Feeders' Day Rp	23.50	U of A's Ag/For., Bull	26.90	U of A's Feeders' Day Rp	39.40

Table 4

Source: Table 5.38: Proportion of Gross Farm Sales Derived from Hog Sales in 1988 Results Sorted by Percentage Use of Information Sources

TOTAL		25% or Less		26–50%		51–75%		76% +	
Western Hog Journal	95.70	Western Hog Journal	91.10	Other Producers	95.70	Other Producers	98.40	Western Hog Journal	98.40
Other Producers	93.90	District Agriculturalist	86.70	Other Farm Magazines	93.50	Western Hog Journal	96.70	Other Producers	97.60
Feed Suppliers	90.80	Radio	84.40	Western Hog Journal	91.30	District Agriculturalist	95.00	Feed Suppliers	96.70
Other Farm Magazines	89.60	Veterinarian	80.00	Feed Suppliers	89.10	Veterinarian	93.20	Other Farm Magazines	93.90
District Agriculturalist	88.20	Other Farm Magazines	75.60	District Agriculturalist	88.90	Alberta Agriculture	91.70	Veterinarian	89.40
Veterinarian	87.60	Feed Suppliers	75.60	Veterinarian	83.70	Feed Suppliers	91.70	Alberta Agriculture	87.10
Radio	86.20	Other Producers	75.60	Newspapers	82.60	Radio	91.20	Newspapers	86.90
Alberta Agriculture	83.60	Newspapers	73.30	Radio	82.60	Other Farm Magazines	90.20	Radio	86.00
Newspapers	83.40	Alberta Agriculture	65.90	Alberta Agriculture	80.40	Newspapers	84.50	District Agriculturalist	85.20
Agribusiness Suppliers	71.50	APPDC Codephone	55.60	Swine Specialist	62.20	Agribusiness Suppliers	74.60	Agribusiness Suppliers	84.20
APPDC Codephone	67.20	Pork Production Handbook	53.30	APPDC Head Office	61.30	APPDC District Meetings	70.70	APPDC District Meetings	78.20
APPDC District Meetings	66.60	Agribusiness Suppliers	51.00	APPDC Sales Office	61.30	Swine Specialist	66.70	APPDC Codephone	76.70
Pork Production Handbook	64.40	APPDC Sales Office	46.70	APPDC District Meetings	60.90	APPDC Codephone	63.60	Pork Production Handbook	73.50
Swine Specialist	63.90	Swine Specialist	45.50	Pork Congress	60.90	Pork Production Handbook	59.30	APPDC Head Office	71.40
Pork Congress	57.70	APPDC Head Office	43.30	Pork Production Handbook	58.70	Pork Congress	54.20	Swine Specialist	70.00
APPDC Head Office	56.90	Agriculture Canada	42.20	APPDC Codephone	57.60	Elevator Agent	50.90	Pork Congress	68.30
Agriculture Canada	53.20	APPDC District Meetings	37.60	Trucker or Assembler	54.60	Short Courses	50.60	Agriculture Canada	62.90
Short Courses	52.60	Short Courses	37.60	Agribusiness Suppliers	53.50	Bank	48.30	Bank	61.90
Bank	51.60	Universities	36.40	Agriculture Canada	51.10	County Fieldman	45.60	Short Courses	61.00
APPDC Sales Office	50.30	Bank	35.60	Short Courses	48.90	APPDC Head Office	44.10	Television	54.10
Elevator Agent	46.40	County Fieldman	34.10	County Fieldman	47.70	Agriculture Canada	43.90	APPDC Sales Office	52.10
Television	44.20	Futures Market	34.10	Elevator Agent	45.50	APPDC Sales Office	41.20	Elevator Agent	50.40
County Fieldman	42.60	Trucker or Assembler	33.30	Bank	43.20	Television	39.00	Universities	49.10
Trucker or Assembler	42.40	Elevator Agent	31.10	Television	38.60	Trucker or Assembler	38.20	Trucker or Assembler	42.90
Universities	42.00	Agricultural Colleges	31.00	Universities	38.60	Universities	34.50	County Fieldman	42.20
Futures Market	35.00	Pork Congress	29.50	Agricultural Colleges	31.80	Agricultural Colleges	31.60	Futures Market	42.20
Agricultural Colleges	34.40	Television	29.50	U of A's Feeders' Day Rp.	31.10	Futures Market	26.80	U of A's Feeders' Day Rp.	39.30
U of A's Feeders' Day Rp.	31.40	U of A's Ag/For;. Bull.	24.40	Futures Market	25.00	U of A's Feeders' Day Rp.	25.40	Agricultural Colleges	37.90
U of A's Ag/For;. Bull.	28.40	U of A's Feeders' Day Rp.	18.60	U of A's Ag/For;. Bull.	18.20	U of A's Ag/For;. Bull.	22.60	U of A's Ag/For;. Bull.	36.50

Table 5

Source: Table 5.35: APPDC Producer District Results Sorted by Average Level of Satisfaction with Information Sources

1 & 2		3 & 4		5 & 6		8		7 & 9	
APPDC Sales Office	3.67	Trucker or Assembler	4.50	Trucker or Assembler	4.00	District Agriculturalist	4.09	Trucker or Assembler	4.00
Western Hog Journal	3.63	APPDC Codephone	3.97	Other Producers	3.97	Veterinarian	4.00	District Agriculturalist	3.64
Veterinarian	3.61	Veterinarian	3.81	Western Hog Journal	3.87	Feed Suppliers	3.94	Other Producers	3.63
APPDC Head Office	3.57	Other Producers	3.73	APPDC Codephone	3.80	Alberta Agriculture	3.92	Pork Production Handbook	3.61
APPDC Codephone	3.52	District Agriculturalist	3.60	District Agriculturalist	3.74	Trucker or Assembler	3.91	Alberta Agriculture	3.55
Other Farm Magazines	3.51	Western Hog Journal	3.58	Feed Suppliers	3.72	Swine Specialist	3.67	APPDC Codephone	3.54
Trucker or Assembler	3.50	Pork Congress	3.45	Swine Specialist	3.60	Other Farm Magazines	3.62	Feed Suppliers	3.54
Pork Congress	3.49	Alberta Agriculture	3.41	Pork Congress	3.55	Western Hog Journal	3.59	APPDC District Meetings	3.50
Swine Specialist	3.47	APPDC Sales Office	3.40	Agribusiness Suppliers	3.50	Other Producers	3.57	Universities	3.50
Other Producers	3.46	Other Farm Magazines	3.35	APPDC District Meetings	3.50	Short Courses	3.53	Short Courses	3.40
Pork Production Handbook	3.40	Swine Specialist	3.34	Radio	3.48	County Fieldman	3.44	Western Hog Journal	3.33
Short Courses	3.34	Elevator Agent	3.33	Alberta Agriculture	3.46	Elevator Agent	3.44	APPDC Sales Office	3.33
Feed Suppliers	3.32	Pork Production Handbook	3.32	Short Courses	3.46	Agribusiness Suppliers	3.30	Agribusiness Suppliers	3.30
District Agriculturalist	3.31	Agricultural Colleges	3.26	Veterinarian	3.45	APPDC Codephone	3.27	Other Farm Magazines	3.27
Alberta Agriculture	3.21	Short Courses	3.26	U of A's Feeders' Day Rp.	3.44	Pork Production Handbook	3.26	Swine Specialist	3.19
Agribusiness Suppliers	3.14	County Fieldman	3.23	Other Farm Magazines	3.42	Pork Congress	3.17	Radio	3.15
Agricultural Colleges	3.12	Feed Suppliers	3.22	Pork Production Handbook	3.36	Radio	3.15	Elevator Agent	3.12
Elevator Agent	3.05	Universities	3.18	APPDC Head Office	3.29	Agricultural Colleges	3.12	Veterinarian	3.12
Futures Market	2.99	U of A Short Courses	3.13	Elevator Agent	3.23	Agriculture Canada	3.03	Newspapers	3.11
Universities	2.94	APPDC Head Office	3.13	Newspapers	3.12	Bank	2.99	County Fieldman	3.09
Newspapers	2.84	Agribusiness Suppliers	3.00	Agricultural Colleges	3.10	Universities	2.96	Agriculture Canada	3.06
Radio	2.83	Radio	3.00	APPDC Sales Office	3.10	Futures Market	2.94	U of A Short Courses	3.00
APPDC District Meetings	2.80	Futures Market	2.88	Agriculture Canada	3.09	APPDC Sales Office	2.86	APPDC Head Office	3.00
U of A Short Courses	2.79	Newspapers	2.88	County Fieldman	3.08	Newspapers	2.85	Pork Congress	2.96
County Fieldman	2.77	U of A's Ag/For;. Bull	2.86	Bank	3.00	APPDC District Meetings	2.62	U of A's Ag/For;. Bull	2.90
Agriculture Canada	2.76	Bank	2.83	U of A Short Courses	3.00	U of A Short Courses	2.48	Agricultural Colleges	2.89
Bank	2.75	APPDC District Meetings	2.70	Universities	2.99	APPDC Head Office	2.42	Bank	2.58
Television	2.63	U of A's Feeders' Day Rp.	2.66	Futures Market	2.92	U of A's Feeders' Day Rp.	2.40	U of A's Feeders' Day Rp.	2.57
U of A's Ag/For;. Bull	2.50	Television	2.61	U of A's Ag/For;. Bull	2.87	U of A's Ag/For;. Bull	2.34	Futures Market	2.56
U of A's Feeders' Day Rp.	2.45	Agriculture Canada	2.59	Television	2.61	Television	2.28	Television	2.23

Table 6

Source: Table 5.36: Years of Experience Results Sorted by Average Level of Satisfaction with Information Sources

10 or Less		11–25		26+	
Western Hog Journal	3.72	Trucker or Assembler	3.81	Trucker or Assembler	4.06
APPDC Codephone	3.71	District Agriculturalist	3.70	District Agriculturalist	3.78
Alberta Agriculture	3.70	Other Producers	3.68	APPDC Codephone	3.76
Swine Specialist	3.69	Veterinarian	3.63	Veterinarian	3.76
Veterinarian	3.67	APPDC Codephone	3.62	Feed Suppliers	3.75
District Agriculturalist	3.64	Feed Suppliers	3.59	Other Producers	3.67
Other Producers	3.61	Western Hog Journal	3.54	Western Hog Journal	3.63
Pork Production Handbook	3.58	Alberta Agriculture	3.49	Other Farm Magazines	3.49
Short Courses	3.48	Other Farm Magazines	3.47	Alberta Agriculture	3.44
Pork Congress	3.47	Short Courses	3.39	Short Courses	3.41
Other Farm Magazines	3.46	Swine Specialist	3.38	County Fieldman	3.37
Trucker or Assembler	3.39	Pork Congress	3.33	Elevator Agent	3.32
Agricultural Colleges	3.34	Agribusiness Suppliers	3.27	Swine Specialist	3.31
Elevator Agent	3.34	Radio	3.25	Newspapers	3.30
Universities	3.31	Pork Production Handbook	3.24	Universities	3.27
Feed Suppliers	3.30	Elevator Agent	3.22	Pork Congress	3.26
County Fieldman	3.23	County Fieldman	3.14	Pork Production Handbook	3.25
Radio	3.21	APPDC Sales Office	3.10	Agricultural Colleges	3.24
Agribusiness Suppliers	3.15	Agricultural Colleges	3.03	U of A's Feeders' Day Rp.	3.15
Agriculture Canada	2.98	Agriculture Canada	2.99	Agribusiness Suppliers	3.14
APPDC Head Office	2.97	Newspapers	2.99	Radio	3.14
U of A Short Courses	2.94	Universities	2.96	APPDC Sales Office	3.10
APPDC Sales Office	2.91	APPDC District Meetings	2.94	APPDC District Meetings	3.07
U of A's Ag/For;. Bull.	2.90	U of A Short Courses	2.91	Futures Market	3.04
Futures Market	2.86	Bank	2.85	Bank	2.97
Newspapers	2.81	APPDC Head Office	2.81	U of A Short Courses	2.94
Bank	2.71	Futures Market	2.76	Agriculture Canada	2.90
APPDC District Meetings	2.68	U of A's Ag/For;. Bull.	2.61	APPDC Head Office	2.85
Television	2.54	Television	2.55	U of A's Ag/For;. Bull.	2.78
U of A's Feeders' Day Rp.	2.53	U of A's Feeders' Day Rp.	2.52	Television	2.77

Table 7

Source: Table 5.37: Number of Hogs Marketed Results Sorted by Average Level of Satisfaction with Information Sources

1–499		500–1499		1500–2499		2500+	
Veterinarian	3.68	Trucker or Assembler	3.83	Trucker or Assembler	4.19	APPDC Codephone	3.93
Universities	3.67	Western Hog Journal	3.71	District Agriculturalist	3.95	Other Producers	3.86
Other Producers	3.60	APPDC Codephone	3.70	Veterinarian	3.78	Veterinarian	3.70
District Agriculturalist	3.58	Feed Suppliers	3.69	Alberta Agriculture	3.70	Trucker or Assembler	3.68
Pork Production Handbook	3.49	Alberta Agriculture	3.64	APPDC Codephone	3.68	Western Hog Journal	3.61
Western Hog Journal	3.49	District Agriculturalist	3.62	Other Producers	3.66	District Agriculturalist	3.57
Alberta Agriculture	3.43	Other Producers	3.61	Western Hog Journal	3.59	Short Courses	3.55
County Fieldman	3.42	Other Farm Magazines	3.60	Swine Specialist	3.57	Feed Suppliers	3.50
Radio	3.40	Veterinarian	3.56	Feed Suppliers	3.55	Swine Specialist	3.46
APPDC Codephone	3.39	Elevator Agent	3.48	Pork Congress	3.54	Pork Congress	3.45
U of A Short Courses	3.38	Swine Specialist	3.38	Short Courses	3.45	Other Farm Magazines	3.42
Other Farm Magazines	3.37	Agricultural Colleges	3.32	Other Farm Magazines	3.41	Agricultural Colleges	3.37
Swine Specialist	3.32	Pork Congress	3.32	Universities	3.38	Pork Production Handbook	3.33
Short Courses	3.29	Radio	3.32	Pork Production Handbook	3.37	Alberta Agriculture	3.21
Feed Suppliers	3.26	Pork Production Handbook	3.30	Agribusiness Suppliers	3.23	Elevator Agent	3.17
Agribusiness Suppliers	3.17	Short Courses	3.28	Elevator Agent	3.19	U of A Short Courses	3.14
Futures Market	3.14	Agribusiness Suppliers	3.26	County Fieldman	3.07	APPDC Sales Office	3.13
Agriculture Canada	3.12	Agriculture Canada	3.25	U of A Short Courses	3.07	County Fieldman	3.10
Trucker or Assembler	3.07	County Fieldman	3.25	APPDC Sales Office	3.06	Universities	3.03
Elevator Agent	3.05	Newspapers	3.08	U of A's Feeders' Day Rp.	3.04	Agribusiness Suppliers	3.02
Agricultural Colleges	3.03	APPDC Sales Office	2.96	Agriculture Canada	3.00	Radio	3.02
Newspapers	3.02	APPDC District Meetings	2.94	Agricultural Colleges	2.99	APPDC Head Office	2.94
U of A's Ag/For;. Bull.	3.00	Futures Market	2.91	Radio	2.98	Newspapers	2.89
APPDC Sales Office	3.00	APPDC Head Office	2.82	Bank	2.94	APPDC District Meetings	2.83
Pork Congress	2.82	Bank	2.78	APPDC District Meetings	2.93	U of A's Ag/For;. Bull.	2.78
Bank	2.80	Universities	2.71	APPDC Head Office	2.91	Futures Market	2.76
APPDC District Meetings	2.77	Television	2.56	U of A's Ag/For;. Bull.	2.90	U of A's Feeders' Day Rp.	2.75
APPDC Head Office	2.75	U of A Short Courses	2.43	Newspapers	2.89	Bank	2.67
U of A's Feeders' Day Rp.	2.70	U of A's Ag/For;. Bull.	2.35	Futures Market	2.80	Television	2.58
Television	2.61	U of A's Feeders' Day Rp.	2.25	Television	2.56	Agriculture Canada	2.53

Table 8

Source: Table 5.38: Proportion of Gross Farm Sales Derived from Hog Sales in 1988 Results Sorted by Average Level of Satisfaction with Information Sources

25% or Less		26–50%		51–75%		76% +	
Veterinarian	3.73	Trucker or Assembler	4.00	District Agriculturalist	3.77	APPDC Codephone	3.88
Other Farm Magazines	3.62	Alberta Agriculture	3.78	Trucker or Assembler	3.77	Trucker or Assembler	3.86
Agribusiness Suppliers	3.50	District Agriculturalist	3.75	Western Hog Journal	3.75	Other Producers	3.79
Western Hog Journal	3.50	Veterinarian	3.68	APPDC Codephone	3.72	District Agriculturalist	3.75
Universities	3.50	Feed Suppliers	3.64	Other Producers	3.62	Swine Specialist	3.73
Alberta Agriculture	3.48	Elevator Agent	3.50	Alberta Agriculture	3.58	Western Hog Journal	3.69
Other Producers	3.47	County Fieldman	3.48	Veterinarian	3.58	Veterinarian	3.69
Short Courses	3.47	Other Producers	3.48	Agribusiness Suppliers	3.55	Feed Suppliers	3.55
Radio	3.47	APPDC Codephone	3.48	Feed Suppliers	3.51	Pork Congress	3.47
Pork Production Handbook	3.46	Western Hog Journal	3.45	Pork Production Handbook	3.42	Alberta Agriculture	3.45
District Agriculturalist	3.41	Pork Congress	3.33	Elevator Agent	3.39	Short Courses	3.44
Newspapers	3.38	Other Farm Magazines	3.30	Short Courses	3.37	Other Farm Magazines	3.40
Swine Specialist	3.35	APPDC District Meetings	3.23	Pork Congress	3.31	Pork Production Handbook	3.36
Feed Suppliers	3.32	Radio	3.21	Swine Specialist	3.31	Agricultural Colleges	3.25
APPDC Codephone	3.30	Universities	3.12	Agricultural Colleges	3.17	Elevator Agent	3.17
County Fieldman	3.20	Pork Production Handbook	3.11	County Fieldman	3.16	Agribusiness Suppliers	3.16
Agriculture Canada	3.16	APPDC Sales Office	3.11	Agriculture Canada	3.12	Radio	3.13
Agricultural Colleges	3.15	Agricultural Colleges	3.07	Other Farm Magazines	3.12	Universities	3.12
Elevator Agent	3.14	Agribusiness Suppliers	3.00	Radio	3.10	APPDC Head Office	3.12
Futures Market	3.06	Futures Market	3.00	APPDC Sales Office	3.00	U of A's Feeders' Day Rp	3.07
APPDC Sales Office	3.00	Newspapers	2.98	Newspapers	2.98	County Fieldman	3.06
Trucker or Assembler	3.00	Agriculture Canada	2.96	APPDC District Meetings	2.92	APPDC Sales Office	3.04
Pork Congress	2.92	Swine Specialist	2.93	Bank	2.88	Agriculture Canada	2.85
U of A's Ag/For;. Bull.	2.91	Bank	2.89	Universities	2.84	Bank	2.84
U of A's Feeders' Day Rp.	2.85	Short Courses	2.86	U of A's Feeders' Day Rp	2.80	APPDC District Meetings	2.84
APPDC Head Office	2.85	APPDC Head Office	2.74	Futures Market	2.69	Futures Market	2.82
Television	2.69	U of A's Feeders' Day Rp.	2.64	U of A's Ag/For;. Bull.	2.61	Newspapers	2.78
APPDC District Meetings	2.59	U of A's Ag/For;. Bull.	2.62	Television	2.57	U of A's Ag/For;. Bull.	2.73
Bank	2.38	Television	2.35	APPDC Head Office	2.50	Television	2.63

8.5 Appendix 5

Tables of Specific Information Needed by Alberta Pork Producers

Table 1

Need for Information on Waste Handling and Farm Usage: Specific Categories
A Percentage Distribution of Responses

Need Information on:	% Yes
Those factors affecting the use of manure in crop production	
Method of application	33.2
Crop applied to	26.0
Soil characteristics	28.7
Application rate	27.0
Swine manure handling systems	
Production site selection and planning	22.5
Physical and biological aspects of manure	24.8
Manure handling systems	30.8
	N=289

Table 2

Need for Information on Selection of Breeding Stock: Specific Categories
A Percentage Distribution of Responses

Need Information on:	% Yes
Congenital defects	
Heredity of congenital defects	22.1
Genetic/environmental defect - ridgling	22.5
Genetic/environmental defect - shaker pigs	20.1
Genetic/environmental defect - spraddle or splay legs	22.8
Genetic/environmental defect - inverted nipples	23.2
Culling procedures	22.1
Genetics of swine herd	
Herd management and records	20.4
Selection programs	25.6
Selection of gilts and replacement sows	
Reproductive characteristics	21.8
Maternal characteristics	21.1
Feed conversion/rate of gain	20.8
Selection of herd boar	
Genetical merit	23.2
Physical condition	22.1
Semen quality	21.5
Mating ability	21.5
	N=289

Table 3

Need for Information on Feeds/Feeding/Rations/Nutrition: Specific Categories
A Percentage Distribution of Responses

Need Information on:	% Yes
Feeding and management of growing finishing hogs	
Heredity of congenital defects	27.3
Pen size and grouping	26.9
Temperature	28.7
Ventilation	30.4
Feeding programs	30.1
Watering methods	29.1
Disease prevention	
Heredity of congenital defects	27.7
Sanitation	29.4
Parasite control	30.1
Tail biting	27.7
Cannibalism	25.3
Feeding early weaned pigs	
Pre-weaned milk diet	23.2
Starter feed selection	27.3
Feed presentation	24.6
Water availability and quality	23.2
Energy in swine feeding	
Feed components supplying energy	32.9
Digestible energy of feeds	33.2
Factors affecting digestible energy of feeds	32.5
Feed stuffs supplying energy	32.1
Feed processing techniques	
Processing protein meals	26.3
Processing cereal grains	26.6
Grinding	25.6
Pelleting	21.8
Paste and liquid feeding	18.0
High moisture grains	19.7
Feed testing	
What analysis should be done	29.8
Sampling	24.6
Time of analysis	23.9
Where to have feed sampled	26.0
How to use results	26.6
Use of minerals and vitamins for swine	
Necessary minerals, vitamins and their sources	29.4
Required amounts of minerals and vitamins	27.0
Method of application	25.2
Protein in swine diets	
Necessary protein levels	30.8
Sources of protein	29.1
Testing feed for protein levels	27.0

Continued

Table 3, Continued

Need for Information on Feeds/Feeding/Rations/Nutrition: Specific Categories
A Percentage Distribution of Responses

Need Information on:	% Yes
Feed additives for swine	
Regulation concerning use	30.0
Purpose for additives	29.4
Types of additives	30.4
Additives for weanlings	26.6
Additives for treatment of swine dysentery	27.7
Additives for growing and finishing hogs	27.7
Additives for sows	22.5
Choosing additives	28.4
Withdrawal periods	27.0
Use of field peas in swine rations	
Regulation concerning use	27.0
Nutrient content	27.3
Amino acid content	26.6
Palatability of field peas	27.0
Feeding methods	25.6
Processing methods	24.9
Economics of feeding field peas	27.0
Use of alfalfa in swine rations	
Nutrient content of alfalfa	20.1
Protein and amino acid content of alfalfa	20.4
Digestible energy of alfalfa	21.5
Vitamin and mineral content	21.5
Use in growing-finishing ration	20.8
Use in gestation rations	19.0
Use in pre-farrowing rations	18.7
Use in lactation rations	18.3
High moisture barley in swine diets	
Storage of high moisture barley	15.9
Acid prevention	15.6
Processing high moisture barley	16.3
Nutritional value of high moisture barley	16.6
	N=289

Table 4

Need for Information on Swine Herd Housing: Specific Categories
A Percentage Distribution of Responses

Need Information on:	% Yes
Planning the building management system	
Space allocation	19.7
Feed handling	20.8
Manure handling	21.1
Heating and ventilation	23.2
Moving hogs	19.7
Planning for expansion and alternate use	26.0
Zoning laws and regulations	21.1
Swine housing facilities	
Space allocation	18.0
Operation size	19.4
Arrangement of buildings	20.1
Construction material	22.1
Flooring materials	22.5
Electrical systems	22.8
Lighting systems	22.1
Ventilation systems	33.2
Heating systems	23.5
Water supplies	21.1
Farrowing equipment	19.4
Farrowing housing	20.1
Swine feed processing	21.5
Swine feed handling systems	20.8
Dust control	24.9
	N = 289

Table 5

Need for Information on Care of Breeding Stock: Specific Categories
A Percentage Distribution of Responses

Need Information on:	% Yes
Management of the gilt and sow for reproductive efficiency	
Management Prior to Breeding:	
Culling	17.6
Selection of gilts	18.7
Feeding/housing	18.7
Management at Breeding:	
Heat detection	16.6
Successful mating	17.0
Pregnancy diagnosis	17.0
Management of the Pregnant Female:	
Feeding during gestation	19.4
Feeding patterns	19.0
Housing and environment	18.0
Management of the Weanling:	
Feeding	19.4
Housing	18.7
Management of the herd boar(s)	
Management Before Breeding:	
Time of purchase	15.9
Transportation	15.6
Isolation	15.9
Age	17.3
Nutrition	18.3
Environment:	
Breeding area	18.7
Penning conditions	19.4
Space requirements	18.7
Temperature	19.0
Breeding Practices:	
Hand breeding	17.0
Pen breeding	16.6
Determination of boar power	19.0
Cross breeding systems for commercial swine production	
Advantage/disadvantage of cross breeding	18.3
Cross breeding systems:	
Terminal or reciprocal crosses	19.7
Rotational or continuous	19.0
Crossbred boars	17.3
Choosing breeds	19.4
	N=289

Table 6

Need for Information on Swine Herd Health and Disease: Specific Categories
A Percentage Distribution of Responses

Need Information on:	% Yes
Internal parasite	
Type of parasites	27.7
Signs/diagnosis	39.4
Causes/transmission	28.0
Treatment	29.8
Prevention	28.0
MMA (Mastitis Metritis Agalactia)	
What is MMA	20.1
Signs/diagnosis	32.2
Causes/transmission	20.8
Treatment/prevention	22.8
Porcine stress syndrome (PSS)	
What is PSS	24.9
Genetic factors	26.3
Tests/diagnosis	24.9
Relationship to meat quality	25.6
Diseases of baby pigs	
Streptococcal infection	21.1
Anemia	19.4
Transmissible gastroentritis	20.1
Baby pig encephalitis	20.8
Baby pig scours	22.8
Erysipeles	
What is erysipeles	22.1
Signs/diagnosis	32.9
Causes/transmission	21.8
Treatment/prevention	23.5
Enzoatic pneumonia	
What is enzoatic pneumonia	24.9
Signs/diagnosis	37.0
Causes/transmission	26.0
Treatment/prevention	27.7
Pale, soft exudative (PSE) and dark, firm, dry (DFD) pork	
Conversion from muscle to meat	23.5
Characteristics of PSE pork	24.2
Causes of PSE pork	24.2
Characteristics of DFD pork	24.6
Causes of DFD pork	25.3
Cost of PSE and DFD pork to industry	25.3
Minimizing the incident of PSE and DFD pork carcasses	23.9
Pregnancy tests for sows/gilts	
Poppler ultrasonic	16.6
Pulse - echo ultrasonic	17.3
Comparing testers	18.3
Using tests in management	17.3

Continued

Table 6, Continued

Need for Information on Swine Herd Health and Disease: Specific Categories
A Percentage Distribution of Responses

Need Information on:	% Yes
Fertility of new boars	
Libido	18.7
Ability to mount	17.6
Ability to mate	18.0
Semen collection and evaluation	18.3
Vaccination of swine	
Principle of immunity	24.6
Vaccines	28.0
Limitations of vaccines	27.0
Developing a vaccination program	25.0
Communical vaccines	25.6
Use of hypodermic needles	23.2
Tail biting in swine	
Causes of tail biting	23.5
Prevention methods	23.5
Treatment for tail bitten animals	23.9
	N=289

Table 7

Need for Information on Managing, Marketing Decisions and Record Keeping: Specific Categories
A Percentage Distribution of Responses

Need Information on:	% Yes
Record keeping systems for swine operations	
Establishing a record keeping system	24.9
How to use or analysis information recorded	26.3
Management of purchased feeder pigs	
Transportation losses	11.1
Preparation for arrival	10.7
Feeding newly purchased pigs	12.1
Medication/vaccination	11.8
Management routines for large breeding and feeding units	
Record systems available	23.9
Management and supervision of:	
Barn	18.7
Office staff	13.8
Feed programs	19.0
Herd health programs	19.0
Maintenance programs	18.7
Incentive programs	20.1
Company operations	15.9
Swine industry	18.7
Marketing breeding stock	
Alberta Swine Breeders Association	11.1
Breeding guarantee	9.7
Registration paper	6.9
Buying/selling tips	12.1
New born pig management	
Mortality:	
Still births	20.1
Weakness and starvation	20.4
Crushing	20.4
Disease	21.1
Physiological factors	20.7
Behavioral factors	20.1
Planning considerations for beginning swine producers	
Types of swine operations:	
Farrowing	14.9
Feeder	15.2
Farrow to finish	16.3
Breeder	14.9
Size of operation	15.6
Site selection	15.6
Financing options	15.9
Purchasing breeding stock	16.3
Feed requirement	16.3
Marketing of production	17.0
Geographic distribution and industry trends	17.0

Continued

Table 7, Continued

Need for Information on Managing, Marketing Decisions and Record Keeping: Specific Categories
A Percentage Distribution of Responses

Need Information on:	% Yes
Weaner pig contract and pricing methods	
Formula pricing methods	19.7
Contracts for supplying weaner pigs	18.7
Marketing of finished hogs	
Explanation of index	23.9
Improving the index of your hogs	27.7
Industry trends	32.5
Analysis of correct weight for market	26.0
Role of the APPDC in the marketing of finished hogs	26.6
	N=289

Table 8

Need for Information on Environment and Land Use Regulations: Specific Categories
A Percentage Distribution of Responses

Need Information on:	% Yes
County restrictions	7.5
Environmental regulations	4.8
Odor control	7.5
Waste management	8.8
	N=147